

# COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

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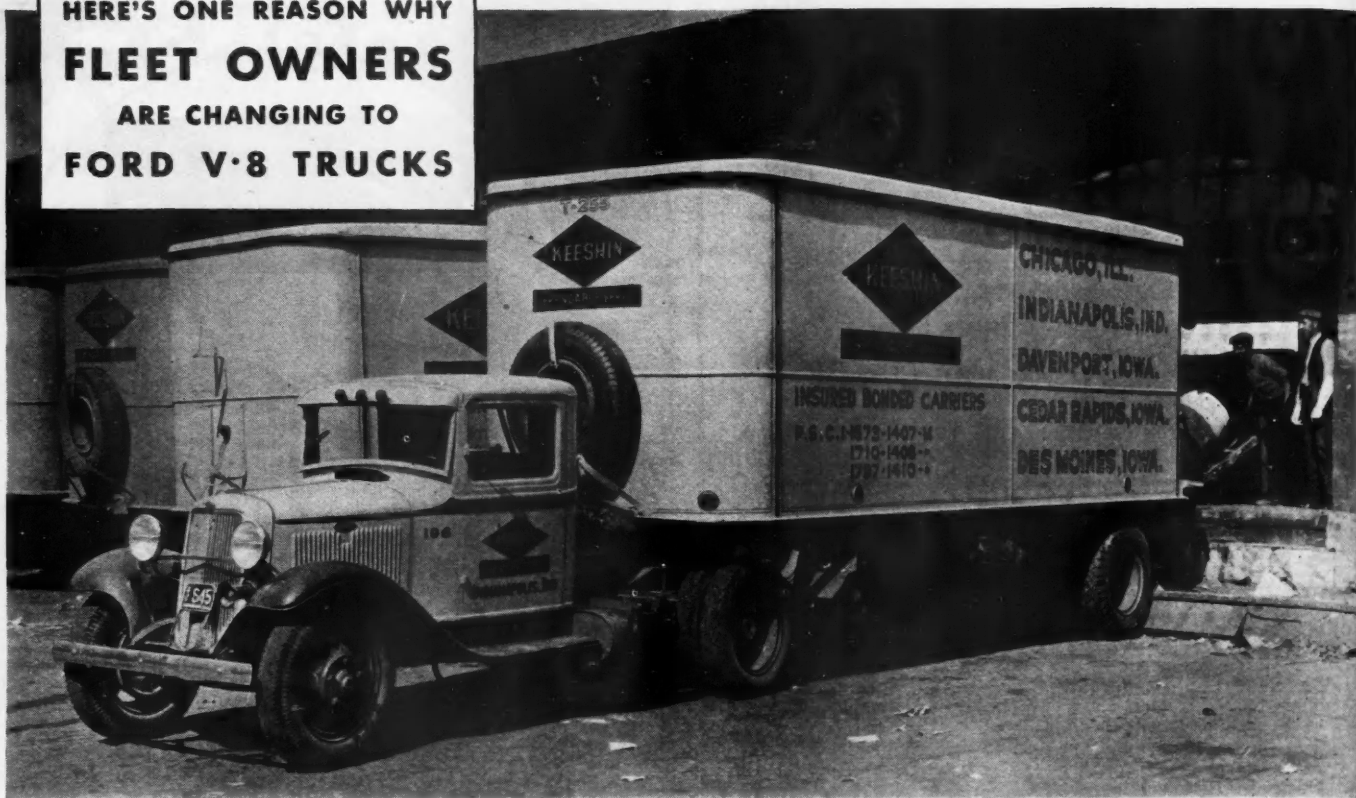
No. 85 Window Regulator. Rust  
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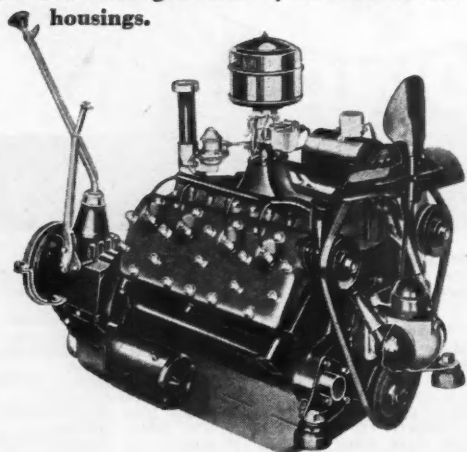
HERE'S ONE REASON WHY  
**FLEET OWNERS**  
ARE CHANGING TO  
**FORD V-8 TRUCKS**



**AMERICA'S GREAT TRUCK VALUE**  
gives you **3** important features not com-  
bined in any other truck at any price . . .

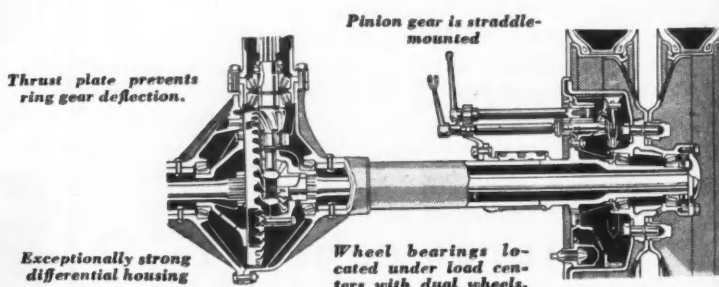
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wheels. You can remove the axle shafts without jack-  
ing up the truck. Straddle-mounted driving pinion  
for extra strength. Heavily ribbed axle and differential  
 housings.



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use out of it. Develops over 80 horse-  
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inserts. Oil-saving pistons of new de-  
sign. New type, heavy-duty, copper-  
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gives you this service, which adds  
years to the life of your truck. Ask  
your Ford Dealer about this plan.

**THE NEW FORD V-8 TRUCK**



## Truck Retail Code Still Months Away

### Catalog Changes Required by NRA's Price Fixing Policy

The truck supplement to the Motor Vehicle Retailing Trade code will require at least another month before it can be whipped into shape for presentation to the industry, it has been announced by the National Control Committee for the MVRT code. Once it is approved by the majority in the trade and submitted to the NRA, however, an additional 30 days will be required before it can go through all the departments and receive Presidential approval.

Reports on used truck sales from which it is proposed to tabulate a depreciation scale for trucks are still being received and until these reports are complete, no further action will be taken on the proposed truck equipment catalog to be used as a basis for depreciating equipment. Changes in the catalog, necessitated by NRA's new policy regarding price fixing in the codes, are under consideration.

Further delay is occasioned by negotiations still to be consummated with all factors in the industry regarding fleet discounts and other questions as related to both large and small trucks and as generally related to government, state and commercial buyers.

### F. L. Sage Joins Chrysler as Chief Truck Engineer

Fred L. Sage, formerly truck engineer of the Studebaker Corp., has been appointed chief of all truck engineering activities for the Chrysler Corp., succeeding the late Benjamin F. Wright. A. G. Herreshoff, formerly in executive charge of the truck division, is now assistant chief engineer of Chrysler Corp. in charge of chassis design.

E. P. Lamb has been promoted to the position of assistant chief truck engineer in charge of drafting, releases and production contact work. Other members of the truck engineering staff include: F. A. Selje, in charge of new truck body design; F. A. Magoffin, production and vendor contact and special investigations; C. W. Kynoch, sales engineering contact; E. G. Wettlaufer, production body drafting, and W. E. Rigley, production chassis drafting.

### 1933 Registrations Off

Motor truck registrations in 1933 fell .8 per cent under the 1932 registrations, a decrease of 2568 units. Actual registrations were 3,229,315 against 3,226,747. Trailers registered in 1933 totaled 472,789.

### Wisconsin Bars Big Trucks on Week-Ends

Through the use of extensive powers to regulate truck and bus transportation, the Wisconsin public service commission has decreed that no trucks weighing more than 6000 pounds gross shall be permitted to drive on the main roads Saturdays, Sundays and legal holidays.

Only vehicles hauling livestock and perishable milk are exempt.

The commission said it had in mind the safety of both the traveling and the shipping public.

It reached its decision after a traffic count showing that 24 of the main arteries are used mostly on Saturday afternoons, Sundays and holidays.

### F. R. Acts in Service Trade; Suspends Codified Provisions

As a step towards solution of the service trade problem, President Roosevelt has issued an executive order affecting approximately 55 uncoded trades. The order authorizes establishment of labor standards which individual members will undertake to observe in agreements with the President.

Among the trades and industries affected is the Retail Automobile Maintenance Garage Trade. Another order dealing with codified trades such as Motor Vehicle Storage and Parking continues suspension of all provisions of approved service codes except those governing child labor, minimum wages and collective bargaining guarantees.

### Ford Sales and Production Up

World sales of Ford cars and commercial units in June totaled 101,661, an increase of 43,118 units over 1933. Total sales for the first six months of 1934 are 489,915, which is 119 per cent increase over last year. Total plant production passed the half million mark in June with 536,637 units, an increase of 308,250 over 1933.

### Norman W. Roblee

Norman W. Roblee, manager of the National Account Department of the International Harvester Co. of America's truck division, died July 2 in Chicago after a short illness. Roblee entered the automotive industry 17 years ago as a mechanic in the White Co. factory. From there he went up the ladder to branch manager. He left White to become vice-president of the Brockway Motor Truck Co. He joined IHC three years ago as sales manager of the Erie Ave. branch in Philadelphia.

## Conference Favors Port of Entry Law

### Members Endorse Road Officials' Gross Weight Regulations

Enactment of a "Port of Entry Law" similar to the Kansas statute calling for establishment of stations at points of highway entry for checking out-of-state trucks, and for the collection of such "reasonable" compensation as may be enacted by the state for the use of its facilities, was proposed at the meeting of the Western Bus and Truck Conference in Salt Lake City last month. Such a measure would provide state reciprocity for commercial vehicles.

The complete proposal would also obligate operators not otherwise qualified to register and submit their trucks for inspection of equipment, show sufficient insurance coverage, show fitness of cargo to enter the state, and furnish proof of payment of taxes to the state for gasoline used to carry the cargo into the state.

Other recommendations proposed at the conference called for the adoption of the axle loads and gross weight formula, with reservations, of the American Association of State Highway Officials, a mileage tax plus registration fee for all trucks, and opposition to diversion of highway revenue for purposes other than roads.

Representatives from Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming attended the conference and formed a permanent organization to be known as the Western Motor Vehicle Conference. Further plans will be perfected at Boise, Idaho, Sept. 14.

### IHC Ups Johnston and Jones to Departmental Managers

Edward A. Johnston and Albert A. Jones were elected vice-presidents at a recent meeting of the board of directors of the International Harvester Co., to serve as managers of the company's engineering and manufacturing departments respectively. Both of the new executives have long records of service in their particular departments. Mr. Johnston began service with the company in 1894 as a machinist, gradually working his way up to his present position. Mr. Jones began in 1904 as an auditor.

### Budget for Trailer Code

The trailer manufacturing industry through its Code Authority has made application to the NRA for a modification of its code of fair competition to enable it to prepare a budget for the administration of the code and a basis of contribution to the same by the members of the industry.

Turn to Page 32 for Additional News

# Treat the Fleet to Beauty

West Coast Operator Goes Hollywood  
and Gives His 75 Vehicles Regular  
Beauty Treatments on Budget Basis

By R. DEWITT MILLER

**S**UCCESS or failure of your hauling business may depend on the appearance of your trucks. That is a rather radical statement. It is, however, the sincere opinion of a fleet owner who has, over a long period of large-scale operation, worked out what he calls his "Beauty Budget."

Martin Richards, president of a Los Angeles trucking company operating 75 pieces of equipment, is the moving power behind this unique method of handling the beauty factor.

"The appearance of your trucks," Mr. Richards declares, "is the outward evidence of the state of your business. It is what personal appearance is to the man seeking a job."

**P**UTTING aside for a moment the business philosophy behind that statement, it is enlightening to consider the system by which this truck owner has achieved a solution to the problem of keeping his equipment looking bright at a minimum of cost.

Included in the shop crew is one man who spends his entire time painting and cleaning trucks. This man is the Beauty Budgeteer in concrete form.

The equipment of the Richards Trucking Co. divides itself logically



## The Beauty Budget

### The Pay-Out

**T**HE annual cost of beauty treatments for 75 trucks operated by the Richards Trucking Co., Los Angeles, averages \$2,000.

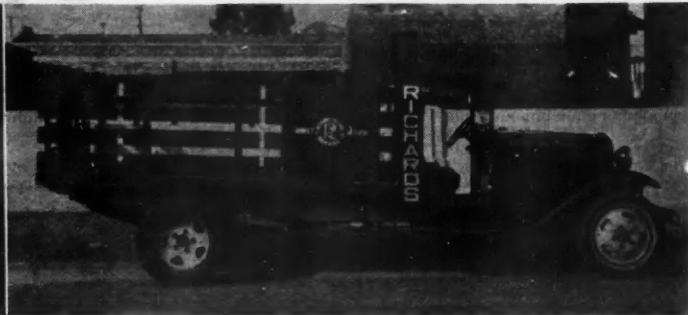
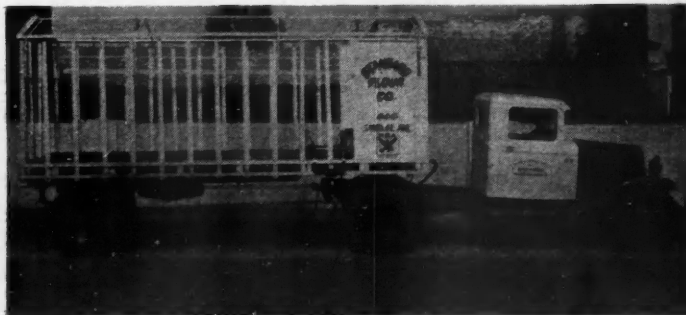
### The Pay-Off

**"T**HE resulting appearance of your trucks," says fleetman Richards, "is the outward evidence of the state of your business. It is what personal appearance is to the man seeking a job."

into two classes. There are the light van-type bodies which are used to pick up freight within the metropolitan areas at the company's three main terminals and carry it to the terminal docks. This type of equipment may be referred to as the "light equipment."

**B**ETWEEN the main terminals, situated at Los Angeles, Santa Anna, and the Los Angeles harbor, the cargoes are hauled on heavy-duty truck-tractor trains made up of trailers and semi-trailers. Only side-rack-type bodies are used on this equipment, which may be styled "heavy equipment."

All light equipment has a high-grade enamel finish sprayed on. Six coats are usually applied. The finish is protected by regular polishing by the drivers. A polish kit is supplied each driver and he is held responsible for maintaining the appearance of his truck. The light equipment is painted regularly once a year, and is washed monthly. The washing is done by a high-pressure gun shooting water at better than 300 lb. pressure. A soap compound mixes with the water as it goes through the gun. The washer is able to reach all parts of the under-frame where mud collects.



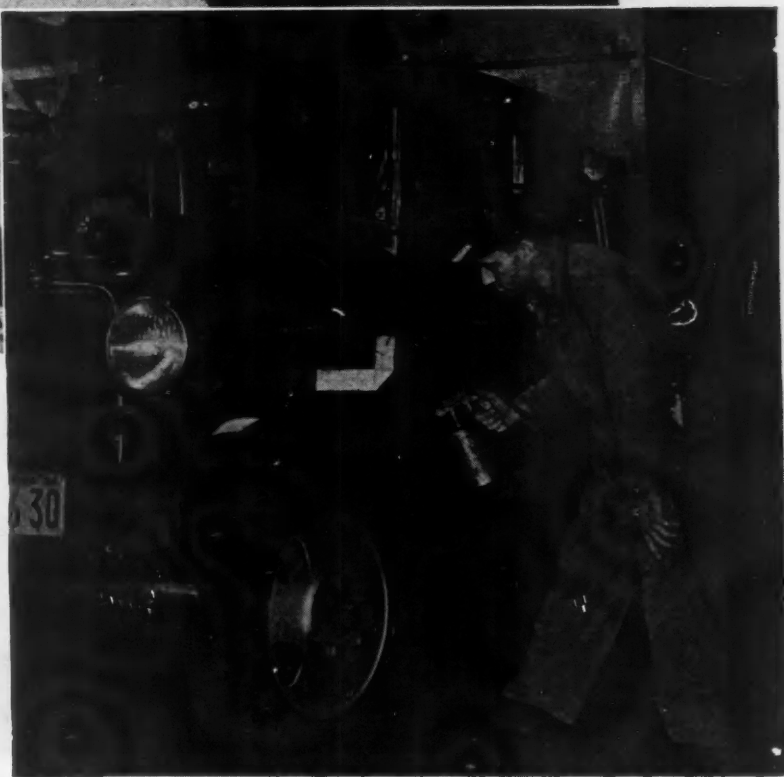
*These dapper trucks maintain appearances (and business, too) with periodical paint and polish beauty treatments*





*Marion Nixon gives herself a beauty treatment for RKO'S "Strictly Dynamite" while Beautician Max Factor looks on*

A STANDARD paint finish is used on the heavy equipment. A gray primer coat is followed by several coats of dark green, which color has been adopted by the company as the most practical. The primer coat is brushed on, due to the large absorption of paint by the raw wood. The top coats are, of course, sprayed. The heavy equipment is painted at least every 18 months and washed every two months. Sometimes particular pieces of equip-



*Trucks go Hollywood, too, with a facial to please customers*



**MARTIN RICHARDS**

*"... I would just as soon have one of my trucks running around with only half a crankcase of oil as have it looking as if it had been through a war."*

ment become dingy and are called in for a paint job before their scheduled time, but the 18-month period is never exceeded.

"I would just as soon have one of my trucks running around with only half a crankcase of oil," Mr. Richards says, "as have it looking as if it had been through a war. Anyway, the shipper would be ashamed to have my equipment drive up to his office."

**D**URING the last five years Richards has been increasing the amount of painting jobs done on his trucks. This has been done in spite of the fact that improved washing methods and cleaning compounds have made the cleaning process "kinder" on the finish. The shortened intervals between paintings may be attributed to two factors.

First, new types of enamels have a much shorter drying period than did the old-fashioned enamels and lacquers. This permits a truck to be painted without tying it up over a protracted period. Better paints and painting methods produce more lasting colors, and are easier and quicker to apply. Richards is concentrating on the latter advantage.

**S**ECOND, it is Mr. Richards' business philosophy that it is not sufficient to keep up to past appearance standards, even if that can be done at reduced cost. The press of present-day competition is forcing truck owners to greatly improve the looks of their equipment. To quote Mr. Richards on the matter:

"I am certainly not painting my trucks more often because paints are poorer and painting methods less efficient than they used to be. Both have been greatly improved. But if my painter can finish more trucks than he could with the old, slow-drying paints,

so much the better. I am certainly not going to shift him to some other department part of the time. If paints keep fresh longer, and washing compounds are easier on the surface, my trucks will look that much brighter. I am not going to merely keep the standard of appearance I had 10 years ago because I can do it cheaper now."

**W**HAT is the total annual cost of beauty under this budget system? The painter receives a salary of \$100 per month. The monthly cost of paint, soap compounds, repairs on the pressure gun, water, and electric power run between \$50 and \$75. That makes a total average annual cost of about \$2,000. Mr. Richards feels that it is worth it. If the present trend away from ugliness in business continues, he is ready to increase his budget.

**N**O owner of a high-grade department store can afford to have a dirty and battered truck drive up to his establishment. He spends thousands of dollars giving the interior and exterior of his store an appearance of beauty and prosperity, and he isn't going to have his work nullified by a truck that looks as though it came from a company about to fold up.

**T**HEN there is the problem of a color scheme. Many operators allow the color scheme of their equipment to grow in a haphazard way, or vary it with different trucks so that it advertises nothing but the rainbow.

A color scheme should do two things: it should characterize the truck and so set it apart as belonging to a certain organization, and it should be made up of colors that do not tend to fade or show dirt too easily.

**T**HE Richards Trucking Co. has adopted the following scheme after

many years of experimentation: Bodies, dark green; wheels and chassis, silver; fenders and radiator shell, black; the emblem of the company in red. The emblem is placed on the side of each piece of equipment by a transfer process.

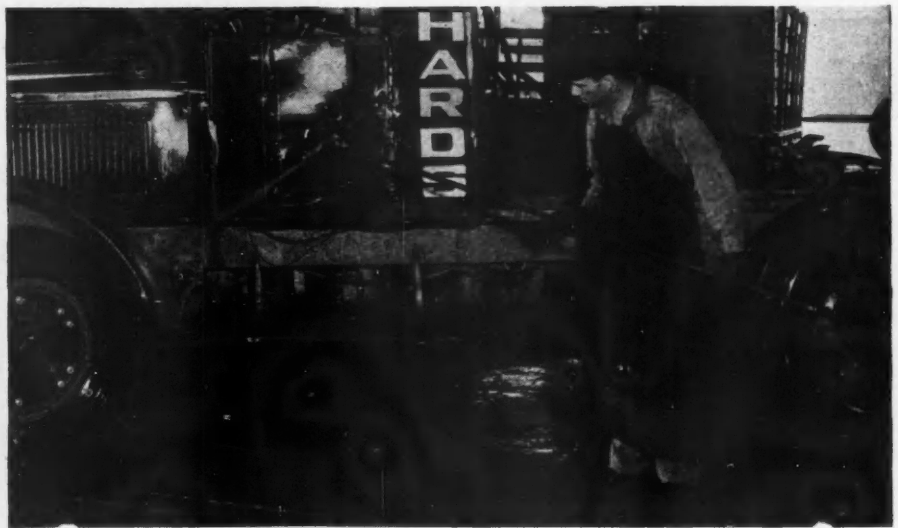
Richards' attitude on truck appearance was recently vindicated in a rather startling way. After a long period of discussion, a contract was about to be signed with a large distributor of flour. One of the terms of the agreement was that two new trucks should be bought for special service on the job. The final point which the flour distributor demanded before he would sign the contract was that the trucks should be painted in the color scheme of his company.

**T**HE company signing that contract was no dainty, feminine organization. It hauled flour—just ordinary, prosaic sacks of the world's most everyday foodstuff. Yet the appearance of the trucks that would haul for this company meant so much that it refused to sign unless the color scheme suited.

There has been a great deal of talk about codes, and fixing rates and methods of competition. Without discussing concrete proposals, it is safe to say that the days of rate-cutting as the chief method of attracting business are gone. It is time to look about for a new means of getting tonnage. There is a simple and very effective means lying handy—the Beauty Budget.

**O**PERATORS who cling to the idea that appearance is a minor factor are staying on a sinking ship. The problem may vary with the individual company, but the principle is the same:

The appearance of your trucks is the concrete evidence of the condition and progressiveness of your business.



*High pressure washing keeps up high pressure appearances*

# The "Ideal" Fleet Truck

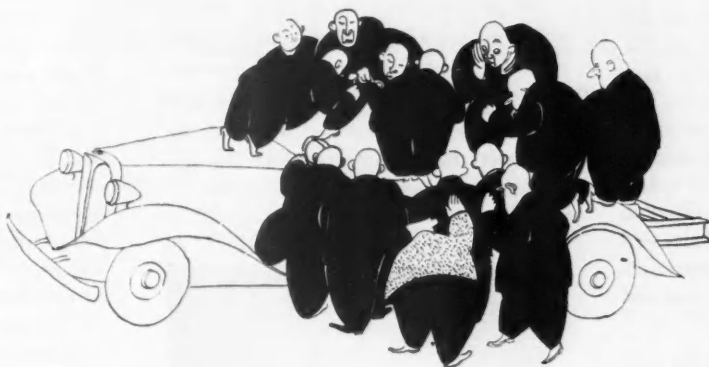
Survey of Operators Results in  
Agreement on Certain Standards  
To Bring Down Servicing Costs

By **F. L. FAULKNER**

Manager, Automotive Department  
Armour & Co.\*

**I**T has been aptly stated that engineering design consists of happy compromises. But, unfortunately, too many of these compromises made in favor of passenger cars, when used in truck design, have proved too costly to the operator. This fact becomes apparent when viewing the history of the automobile industry, during which time the automobile developed from a pleasure-type vehicle to a business necessity. The motor truck, developed after the pleasure car, carried with it many elements of design of its predecessor. If those developments cause mechanical failures in pleasure cars, they are seldom more than annoying. In a truck, however, such failures prove costly when a customer is disappointed over a late delivery because of the delay.

It would be unfair, of course, to place the blame upon the manufacturer because of a lack of standardization and uniformity of truck performance without giving due credit to the fine improvements in mechanics and design. However, it is fully realized that there is room for further economies in operation if only the sympathy of the manu-



facturer can be aroused to take cognizance of the fleet operator's needs.

**I**NVESTIGATIONS made by the transportation and maintenance committee of the Society of Automotive Engineers among a large number of operators confirms the belief that there is a wide variance of opinion among operators as to just what they do want in the way of truck design that will facilitate maintenance and reduce operating costs. However varied the tabulated opinions were, indication was that there is room for considerable improvement.

It was necessary to prepare a questionnaire from which the various opinions could be tabulated. This list of questions was sent to many outstanding operators with requests for their recommendations as to standardization. It appears when checking through the returns that much of the criticism against manufacturers is due less because of fundamental design and more because of a lack of coordination of units in making up final assembly, as a preponderance of evidence shows that there are entirely too many extreme cases of inaccessibility of parts for both minor and major servicing.

**K**EEPING in mind the recommendations for standardization, it is not advocated that all types of vehicles

should be so closely standardized that they would lose their identity, but it is felt that many items of design could be standardized among vehicle manufacturers with marked improvement in maintenance. The following is a brief compilation of major recommendations by operators, suggesting

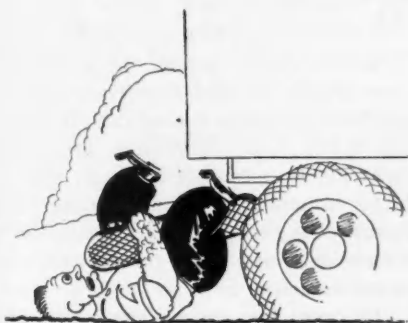
the design of what to them would be the "ideal" fleet truck. They believe that certain such standards would reduce servicing costs.

**FRONT BUMPERS**—Type: channel bar. Height from ground: light trucks and cars, 17 in.; heavy trucks, 23 in.

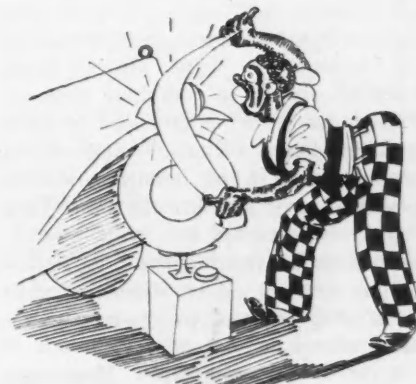
**RADIATOR GUARDS**—Many operators recommend and use radiator guards on certain classes of equipment, but it is the consensus of opinion that radiator guards should not be furnished as standard equipment.

**RADIATOR GRILLS** — Non-essential, and contribute to higher maintenance cost without any return for the investment; not recommended.

**CHROMIUM PLATING**—There has been a definite trend on the part of many manufacturers to chrome-plate



Tire racks can be easier on drivers



Bright-work puts accent on "work"

\* Excerpts from S.A.E. Summer Meeting paper.



### The Facts in a Nut-Shell

all trim parts, such as bumpers, headlamps, headlamp tie bar, radiator shell, radiator grill, hood side doors, cowl beading, windshield frame. It is generally agreed among operators contributing to this study that bright parts should be held to a minimum of headlamp, door frames and radiator shell.

**RADIATOR**—Type: tubular; mounting, rubber; fill opening size,  $2\frac{1}{2}$  in.; location, inner left-hand side. Provision should be made in sod pan to permit of collecting drainings from radiator without waste, as many operators use permanent-type anti-freeze solution.

**ENGINES**—The oil filler pipe should be a minimum of 2 in. in diameter, located on the left-hand side of engine. The oil gage should be of stick type and located on left-hand side, with sufficient accessibility to assure accurate gaging. It has been suggested that oil sticks be provided with a flared collar which fits snugly to crankcase when in running position to afford better seal against oil leakage and to prevent foreign matter from working in around the stick.

**CRANKCASE** drain opening should be  $\frac{3}{4}$  in. minimum, plug type, with recess for  $\frac{5}{8}$ -in. square-head wrench. The oil pressure regulating valve should be located on the left-hand side, with external adjustment, where same is readily accessible. Flywheel timing mark should be visible from the front right-hand side of engine. Exhaust manifold flanges were given very serious consideration, but due to variation in design we are offering no recommendation as regards their standard. It is hoped, however, that designing engineers will give this matter serious consideration from a standpoint of stud diameter and available gasket area.

**CLUTCH HOUSING** should be provided with external fitting that is accessible from under right side engine hood for lubricating clutch throw-out bearings.

**TRANSMISSION** — Filler opening: location, left side. Transmission case at lubricant level. Size, minimum,  $\frac{3}{4}$  in. diameter. Type: elbow. Drain opening, size  $\frac{3}{4}$  in. minimum plug, recessed for  $\frac{5}{8}$ -in. square-head wrench.

**REAR AXLE**—Filler opening should be minimum  $\frac{3}{4}$  in. diameter, located center of cover at lubricant level. Plug should be recessed for  $\frac{5}{8}$ -in. square-head wrench. Drain opening located at bottom center.  $\frac{3}{4}$ -in. diameter minimum plug recessed for  $\frac{5}{8}$ -in. square-head wrench.

**CABS** — Two-man type. Mounting: three-point suspension. Ventilation:

It is the opinion among operators of large fleets of motor vehicles that a material reduction in servicing costs could be made, providing manufacturers of vehicles cooperated with them in effecting standards of such items that do not enter into their fundamental design, but which affect vitally the mechanical servicing of these units.

This opinion is based on a review of the numerous items that need constant servicing of which there are 26 major ones. It is hoped the questionnaires sent among fleet operators and briefed in this article will accomplish two things. First: a more unified opinion among operators as to their actual needs. Second: a better understanding and a more sympathetic attitude on the part of the manufacturer to the operator's requirements.



F. L. FAULKNER

*"... engineering compromises made in favor of passenger cars, when used in truck design, have proved too costly to the fleet operator."*

top of cowl in center, minimum. Dimensions: inside height, 50 in.; inside width minimum 50 in.; inside back to dash, 36 in.; height, floor to top seat cushion, 13 in.; height, floor to steering wheel, 22 in.; door width, minimum 31 in. Door hinge at front.

**INSTRUMENT BOARD**—It is recommended that all control devices be removed from the steering wheel and the instrument board and be

equipped with the following: speedometer, oil pressure gage, head indicator, ammeter, gasoline gage, choke control, throttle control and light switch. It is further recommended that high and low-beam lights should be controlled by foot switch, located at left of clutch.

**GASOLINE TANK**—Two recommendations are necessary for location of tank, due to wide application of passenger type chassis for commercial work. Light trucks and passenger vehicle tanks to be located at rear of frame. Large truck tanks to be located under cab seat. Fill openings to be of elbow type, minimum opening 2 in. diameter. Location, left side, outside cab. Stand pipe to be baffled. Tank cap to be of bayonet type. Tank drain  $\frac{1}{2}$ -in. plug.

**LUBRICATION FITTINGS** should be of the zerk snap-on type.

**AIR CLEANERS**—An adequate air cleaner of the oil-bath type should be standard equipment on all types of vehicles.

**OIL FILTERS**—An adequate oil filter of the cleanable type should be standard equipment on all types of vehicles. Location, left side engine, accessibly mounted for cleaning.

**HORN**—A horn of electric type, located under engine hood, is recommended. We are not prepared at this time to make any recommendations as to rating of a horn for general commercial use.

**WINDSHIELD GLASS** — Shatter-proof safety glass should be standard for all cab windshields.

**WINDSHIELD WIPERS**—All cabs should be equipped with two wipers. Method of drive optional; vacuum preferred.

**REAR-VIEW MIRRORS**—Type of bracket: tubular. Length adjustable with minimum of 12 in.

**FRONT FENDERS**—The conventional type of front fender appears to be generally satisfactory. However, many operators are requesting that a coach-type fender be made optional on the part of the manufacturer.

**WHEELBASE AND FRAME LENGTH**—This subject has been reviewed again among the operators contributing to this discussion and it has been generally agreed that the present S.A.E. C.A. dimensions are satisfactory. It is hoped, however, that a larger number of manufacturers will incorporate the present C.A. standard dimensions into their present line of motor vehicles.

**BATTERY LOCATION**—There is con-

(TURN TO PAGE 53, PLEASE)

# Ears to the Ground

Giving You Information Some of Which Is Inside, Some Advance and Some Just Unusual

## Okay for Trucks

**P**ROBABLY you read the newspaper accounts of the synthetic rubber tires developed by the Dayton Rubber Mfg. Co. We did, and we were curious to know if the synthetic rubber would stand up in truck tires. So we wrote the factory. Vice-president Friedlander responded: "When the demand for synthetic rubber tires enables us to go on and make them regularly, we will undoubtedly manufacture the truck sizes as well as passenger car sizes."

## An Oil Signal

There's a device on the market which clamps on the dash and automatically flashes a warning the instant the oil in the crankcase becomes low or thin, or the pump fails. The warning point may be adjusted by the truck owner, at one or two quarts below full or at half crankcase level. There is no flash when rounding curves, climbing grades or making quick stops. It is reasonably priced, and easily installed. If you're interested, drop us a line and we'll see that you get complete details.

## Now It's Frozen Salt

Now we have frozen salt, or "Salt Ice," competing with solid carbon dioxide (known more popularly as Dry Ice and Carbonice) for favor as a compact refrigerant in the truck market. "Salt Ice" is made by mixing water and rock salt in the proportions of 76.7 per cent water and 23.3 per cent salt. The brine is frozen into ribbons, flaked and compacted under pressure of 25 tons into 30-lb. cakes measuring 10 in. x 10 in. x 8 in.

## It's a Lot Cheaper

"Salt Ice" melts at a uniform temperature of -6 deg. Fahr. The brine can be used over and over again. Three pounds of "Salt Ice" are said to do the work of 1 lb. of solid carbon dioxide. The latter ranges in price from 2 to 4 cents per lb., while 3 lb. of "Salt Ice"



This is a "Sentinel" steamer. See item entitled "A Steamer in Our Midst"

can be produced by the average user at  $\frac{1}{4}$  of a cent a lb. Compared with the old standby—crushed ice and salt—the new product costs less, is more convenient and absorbs 18 more B.t.u.'s per lb. If you want to know more, just write in.

## Oil Converter Ready

The fuel oil converter mentioned here last month is now ready for the market. It converts a gasoline-burning internal combustion engine into a fuel oil burner. The adapter can be used on any type gasoline engine and adds only 5 to 7 lb. to its weight.

## Shows Up in Tests

In a test, witnessed by men from the truck industry, a decrease of 24.2 per cent in fuel consumption was shown when running full throttle on oil, together with an increase in revolutions per minute. No mechanical changes or carburetor adjustment were made. A 636-mile road test, which ordi-



This combination gasoline tank and trailer has been operating for months between Enid, Okla., and Denver, Col., handling 2200 gal. of gasoline and 5 bbl. of oil one way and 17,600 lb. of potatoes on the return trip. Carries its own fuel, 100 gal., in the rounded nose above the deck

narily requires 270 gal. of gasoline costing \$48.60, was made on 205 gal. of fuel oil costing \$14.35.

## Diesel for Ford?

While on the subject, it may interest you to know that Arthur Brisbane has quoted Henry Ford as saying: "The Diesel has got to come. I do not know or

care in just what shape, but it is our business to find out." Brisbane says expert guessers think Ford's next stunt will have something to do with "a Diesel engine in the new 'Lizzie'."

## On the Way Up

A prominent truck manufacturer is planning to make an unusual heavy-duty announcement just after the worst of the summer's heat is over. We've seen pictures of it and it's a brilliant achievement.

## A Steamer in Our Midst

F. G. Goddard, director, The "Sentinel" Waggon Works, Ltd., England, dropped in on us to say that he was in this country with a "Sentinel" truck which he will demonstrate for several months. The job is a steamer (see illustration) with a 4-cylinder, single-acting, poppet-valve engine that develops 120 hp. at 1200 r.p.m. It is capable of a road speed of 50 m.p.h. Mr. Goddard will be glad to hear from operators and any firm which would care to consider taking over "Sentinel" manufacturing rights in the U. S. He may be reached c/o Turner's Transfer, Box 175, Greensboro, N. C.

## Chance for Right Man

We have been in correspondence with a man who wants to contact an individual who could take complete charge, from designing to producing and helping with sales, of a small truck and trailer assembling plant to be located in a southern State. Investment in the venture is not an absolute requirement. We will be glad to forward correspondence.—G. T. H.



*Perfect Circle piston expander*

## Dope on Piston Expanders

**Experience of Fleet Men Shows  
That Use of Expanders Extends  
Cylinder Reconditioning Period**

**W**HAT do you know about piston expanders?  
Do you know where to install them to get the best results?

Do you know when to install them?

Do you know what to expect of them after you have installed them?

COMMERCIAL CAR JOURNAL has attempted to gather the information which, if conclusive, would answer these questions. Included in this effort was the contacting of piston expander manufacturers for the purpose of having them shed as much light as they could on this recent development of truck maintenance. In addition, al-

most 100 fleet operators were questioned for their experience and opinion.

**A** VERY limited number of the operators said, "It's spinach and we want no part of it." Others are still experimenting to find their capacity for green groceries, and still others, forming by far the largest group, have found that expanders very definitely add calories to their maintenance diet.

It was hoped that the few who have already turned thumbs down on the idea would be able to give some definite information which led to their decision. This was not the case. Some

of them have given piston expanders no trial at all and consequently remain on the books as a job for a good salesman. The others have done very little experimenting with any device for expanding pistons, and the small amount of experimenting that has been done has taken place under varying conditions with miscellaneous types of vehicles and only sketchy records of the accomplishment have been kept.

**T**HE operators in the second group are reluctant to give any opinion as yet because they have not satisfied themselves that they know what they

COMMERCIAL CAR JOURNAL

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JULY,



## By HENRY JENNINGS

Technical Editor

are talking about. Some of them have reached a definite conclusion on one type of piston and are still trying to get facts on the ability of expanders to perform on other types of installation. There are a number in this group who are uncertain, who have made installations so recently that sufficient mileage to give them a true picture will not occur for some time.

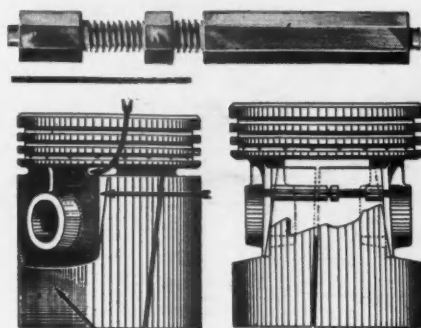
The opinion of the third and largest group can best be summed up by quoting the opinion of one of their number. Some of this group will not agree completely with the mileage totals as he states them and others will not agree with the one-thousandth of an inch of wear as he finds it, but in the main this is their story:

**"YES,** I use piston expanders. Especially in the lighter trucks. In the past when the trucks reached 20,000 miles we tore them down. The cylinders needed reconditioning and it took .020 of an inch to clean them up. This limited our light trucks to 60,000 miles, because we were not very successful in removing more than .060 of an inch from the cylinders of any of our light jobs.

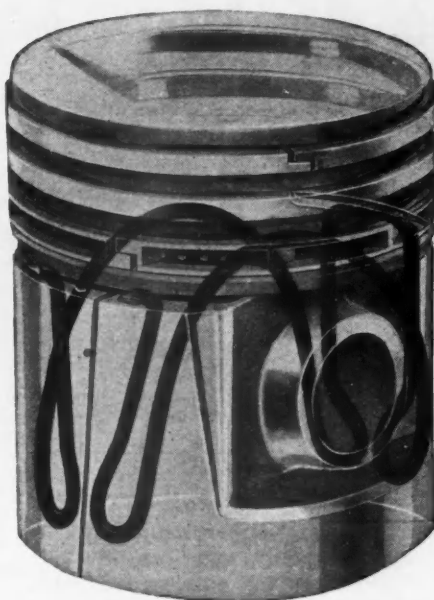
"No, we run them 20,000 miles, pull them apart, install piston expanders, and send them on their way. The expanders make them last for another 15,000 to 20,000 miles, at which time we recondition the cylinders without digging out any more metal than we would have at 20,000 miles. Thus, we are able to make the engines outlast the rest of the truck."

**NONE** of the operators questioned had anything to contribute relative to the performance of piston expanders when used inside of cast-iron pistons. For the most part, they are not willing to attempt to expand this type of piston because, in most cases, they have been told that in order to get maximum results the skirt of the piston must be slotted with a hacksaw. Such treatment of a piston brings forth a fear of piston breakage and so far no one has convinced them that their fears are unfounded.

**A** PARTS jobber, who has long been aware of the importance of the truck industry as a buyer of his merchandise, gives this version of piston expanders: "We want to sell piston expanders with every single alloy piston ring installation. We are not so sure yet about the cast-iron piston jobs. True, they give us a plus sale, but that is not the point. Piston expanders take



*Hoof-Ross piston expander*



*American Hammered expander*



*Simplex piston resizer*

the overload off the rings and, right now, rings need all the help they can get. We cannot afford to have ring failures among the users of our rings, and piston expanders are helping us in this respect."

"May I call to your attention the fact that many of the manufacturers of expanders also make piston rings. Certainly piston rings represent the largest part of the business to the combination manufacturers and they have no desire to admit that their rings need some help unless it is true."

**R**IGHT here, the reader may ask, "Why do we need piston expanders? Rings have taken care of us in the past. What change has come about that even brings up the question of piston expanders?" The answer is that the speed of piston travel has been increased greatly. This increased speed alone makes the oil control problem more difficult, as anyone who has operated trucks over fast routes can testify.

As a result of this increased speed, alloy pistons have become popular because it was desirable to reduce the weight of the faster-traveling pistons. Whether it is wear or collapse, is uncertain, but the alloy pistons assume a smaller skirt diameter more quickly than do the cast iron. The increased speed also causes more rapid wear of the cylinders. These facts impose a new set of conditions upon the rings. They are traveling at higher speeds and they have a tougher job forced upon them because of the increased clearance between the piston and the cylinder. That rings need some help to take care of these unusual conditions is no criticism of the rings. And the introduction of expanders is simply an acknowledgment on the part of the engineers that new ailments require new treatment.

Certainly no one can accuse the expander manufacturers of routine thinking. One look at the various expanders would dispel any such idea. So many completely different features could not possibly be the expression of one school of thought. As a matter of fact, the manufacturers are not in complete agreement as to what causes the excessive clearance between the piston and cylinder wall. They are in agreement only on the obvious point that excessive clearance can be taken up by expanding the piston. But when it comes to the method by which this expansion is to be brought about, the makes differ decidedly.

(TURN TO PAGE 62, PLEASE)



## Servicing Babies by Truck

Delivery of Diapers and Collection of Discards is Novel Laundry-to-Nursery Shuttle Service and Field for Trucks

By  
**STANLEY GERSTIN**

### *Matrimonial Influence*

This baby diaper laundry business apparently exercises unusual influence on the employees. The last four in turn have entered the realms of matrimony after working at the Dy-Dee Wash only a short time. Probably figured caring for babies now will be a cinch. The last the writer heard was that diaperman Foote himself would be married by the time this story appeared.

### *Lilliputian Bazaar*

The lost and found department has become a regular division of the laundry. Dozens of containers are usually brought back to the plant containing dolls, other toys, and even children's clothes. Such items are not discovered until the containers are opened. Several cartons of stuff are still on location waiting for owners to claim their things.

ers to show friendliness to babies along their routes.

**D**IAPERS are delivered in sanitary green-enameled cans, lacquered in gold on the inside, fitted

with a handle for carrying, and are cleansed with special antiseptic soap. Mr. Lau believes that if he can get at least 1 per cent of the 50,000 or 60,000 babies born about Chicago every year, this business would net him a comfortable income.

Just how vital a role the truck salesman played in this depression-breaker business is manifested by the fact that the salesman was responsible for the spread of the business in Eastern Pennsylvania. About a year and a half ago—that is, six months after Mr. Lau's party—a scene similar to that in Chicago was enacted in Narberth, Pa., a suburb of Philadelphia. A truck salesman who had attended Lau's party was also present at this one and related the interesting story. Next morning the same remark was made to Philip H. Foote by his sister, who has two children. (He himself is an eligible bachelor.) "Well, how about a diaper laundry?" So Mr. Foote and Thomas J. Skillman, Jr., took a trip to Chicago, got the facts from Mr. Lau, came back to Narberth, equipped a laundry, bought a truck and waited for business.

**A**T first, mothers were prejudiced against using strange diapers or allowing a laundry to wash their babies' diapers, and business dragged.

**I**T started in Chicago about two years ago when Albert Lau, a bond salesman, was giving a party. There was a discussion of ideas for beating the depression and someone suggested a diaper laundry as a clean, economical business. (Laughter.) The next morning (as the story goes) Mrs. Lau said, "Well, how about a diaper laundry?" whereupon Mr. Lau gave up selling bonds and opened the Dy-Dee Wash, the Original and Approved Scientific Institute of Diaper Hygiene.

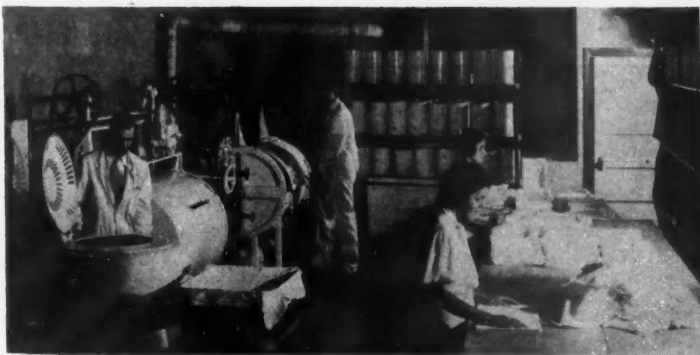
At first the customers could be counted on ten fingers. Now the business grosses \$20,000 yearly. As someone stated, "Last Winter's blizzard tied up Chicago's traffic and street cars, but the Dy-Dee trucks went through." This was a pretty compliment to the efficient part trucks play in the diaper business. Babies can't wait, you know.

Diaperman Lau operates only in the Chicago area (which leaves a lot of space for others to operate in this promising business), employs half a dozen or so help, runs three trucks and a small laundry building. Of his yearly gross business about \$8,000 goes to Lau as profit. A personal touch in the business seems to be the secret of Lau's success. He admires babies, calls up to ask after their health if a customer has been ill, and instructs driv-





*Here are the customers—there are more like these throughout the land*



*Here the diapers are washed, dried and wrapped*



*Diapermen Foote and Skillman load their truck*

Prejudice, however, soon gave way before science, the idea took root, confidence grew, and now two trucks are busy making deliveries.

Today the Dy-Dee Wash, Inc., of Nar-

berth, washes and delivers 15,550 diapers weekly, 8 tons, four times a week to approximately 500 customers. Diapers are purchased ready packaged and are delivered 24 in a metal container. A

baby uses the same set of diapers supplied new by the laundry and which usually lasts the diaper-life of a child (12 to 18 months). When they are through, what is left of the threadbare



things is given to the hospitals. Some people supply their own diapers.

Customers are obtained chiefly through hospital recommendations and the Dy-Dee Wash truck may be seen in the hospital drive-way about the same time that the stork arrives. Approximately 40,000 babies are born in and around Philadelphia every year, so problems of birth decline do not now worry diapermen Foote and Skillman.

WHEN asked how business was obtained, diaperman Foote replied, "That was a tough one. We just sat around. Advertising was difficult and expensive. We contacted the hospitals and sold them on the idea. We watched the birth lists and society columns. We had to break down a lot of prejudice. The first few customers were very hard to get and things looked discouraging. We hung on, and a good thing too, because now we are going places."

These young laundry men (they've only been out of college several years) now have a regular story as to why their service should be used. They say—it is the modern dependable method of diapering your baby. It is recommended by your physician, hospitals, and over 500 pleased customers. It is a time saver—permitting more leisure time. It is a money saver—no diaper costs—no container to purchase—no soap expense—no increased water, gas or electric bills. It gives absolute assurance that the diaper used on your baby is sterilized, and is free from all harmful irritating chemicals. The clean, sterilized diapers are delivered to the door every day in clean metal containers which have also been sterilized and lined with wax paper. The container serves as a receptacle in which used diapers are placed and in which they are removed at each delivery.

DIAPERS are washed in the most modern fashion and finished tumbled. The cans are sterilized and lined with a waxed paper bag in which fresh diapers are inserted, and the container is then ready for delivery. The containers are supplied by the Acme Can Co., Philadelphia.

The average number of diapers used each day per baby is about 18. Their biggest customer,



says diaperman Foote, was an unusually wet "repeal" baby who used 36 per day—but that was unusual.

Diaper service is not a luxury in cost as some people would think. Prices run somewhat like this: 63 dy-dees per week at \$1.25; 84 per week at \$1.45; 126 a week at \$1.75. Babies rarely use over that number.

THE business is clean and economical. The trucking service costs about 40 cents per week per customer—making four stops a week at a rate of 10 cents a stop. Deliveries are made in two ½-ton trucks. Each truck carries a load of 50 packages, two loads a day, and cost per mile of operation including salaries is estimated to be about seven and one-half cents. Trucks cover

from 100 to 150 miles a day. Diaperman Foote says that the business could not be conducted without trucks because the customers are scattered and cannot otherwise be reached economically. A third truck is being considered.

There are other such services throughout the country. The Di-De Service, Jersey City, N. J., plans to begin operations early this fall. According to their prospectus they will operate a fleet of trucks of both the light delivery and heavier van type. The company plans to pick up and deliver to customers from remote delivery stations using light type trucks, while transfer between the remote stations and the main plant will be made in heavy trucks.

CLEAN, sterilized diapers will be wrapped in cellophane. After use they are placed in metal containers and removed at regular intervals. Specially designed racks are to hold the containers. At the plant the racks are removed from the trucks, placed on conveyors and moved to the washing room.

From these plans, it seems that an active salesman might find this prospect a very promising one. Similarly, just as the diaper laundry idea was carried from Chicago to Narberth by a truck salesman, so may others carry the idea and start this new business rolling—as well as their trucks.

THERE are now approximately 14 diaper laundries throughout the country. In addition to those already mentioned, they are: The Baby's Valet, Oak Park, Ill.; Allen Laundry Service, Allentown, Pa.; Dates Laundry Service, Kenmore, N. Y.; Sani-Dide Service, New York City; Grant Geiger, Peoria, Ill.; Dy-Per Service, Inc., Indianapolis; Crawford Laundry, Detroit; Dye-Dee Wash, Denver; Napps Laundry, Los Angeles; Martins Dy-Dee Wash, St. Louis, and Baby's Dydee Service, Inc., Brookline, Mass. The full extent of this market becomes significant when we consider that if a truck delivered 1000 diapers a load, two loads a day, 18 diapers to a baby, it would require 19,800 trucks to deliver 39,600,000 diapers daily to our yearly crop of 2,200,000 babies.



Freshly laundered diapers are delivered in these containers lined with wax paper

# Governors Save 7-10% on Gas

Longer Engine Life and Reduced  
Tire Wear Also Proved by Tests  
on Governor-Controlled Vehicles

By **WILLIAM E. FRAZER**

West Coast Operator

**I**N the March, 1934, issue of **COMMERCIAL CAR JOURNAL**, this writer explained in some detail the manner in which the fleet with which he is connected was conducting tests to prove or disprove the efficiency of governors with respect to economy in fuel consumption and maintenance work.

This test disclosed the fact that the average gasoline consumption for governor-equipped vehicles for the 12 months' period was 7½ per cent less than for the vehicles not so equipped.

The 12 months' test made in the above manner was not, however, considered conclusive, and two more types of tests were decided upon, to be made consecutively. This article will deal with the six months' results of the second type of tests which showed fuel consumption savings around 10 per cent.

**T**HE vehicles used in this test were also employed in test No. 1, but they were assigned to different drivers in different localities, performing, in some instances, similar types of work to their assignments in test No. 1, and in other instances performing different types of work. The basic idea of making this test was to determine what effect different drivers, or different road conditions, or different work, had upon the efficiency of vehicles equipped with governors, and those not equipped with governors, as compared with the results obtained in test No. 1.

The results of this test in general continue to indicate that the careful use of governors does result in fuel



*Fig. 1. The tire on the left showing even wear was used on a governor-controlled truck. The other, used on a non-equipped truck, shows spotty wear due to high-speed get-away and sudden stops. Governors control this high-speed movement*

economy, although it must be remembered, as stated in my previous article, installations must be made discriminately.

For ready reference in following the transfer of each vehicle from old

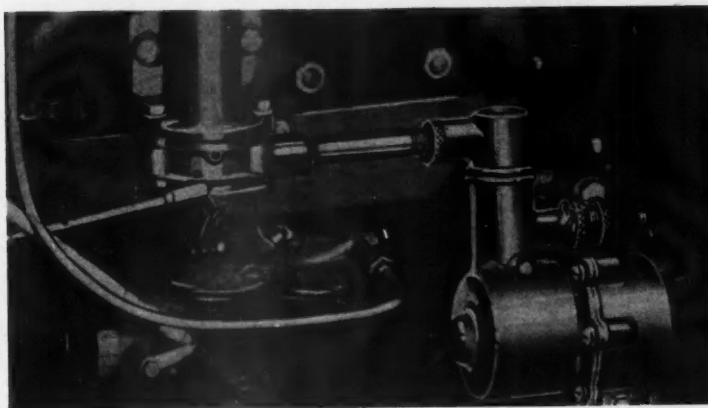
assignment to new assignment, the following table is submitted:

Test No. 1 OLD JOB			Test No. 2 NEW JOB	
Car No.	Job	Mi. Per Gal.	Job	Mi. Per Gal.
†1	A	13.1	B	13.1
2	C	12.5	A	11.1
†3	B	11.8	D	15.1
†4	K	10.1	E	11.0
5	F	13.7	C	12.0
6	G	8.9	H	11.4
7	I	8.7	J	11.1
8	Inoperative		F	13.6

† Governor-Equipped.

Car No. 1 was transferred to job B for test No. 2, after having been on job A during test No. 1. From the table it will be seen that the change in drivers and territory covered had no effect upon the fuel consumption either way. This car, a pick-up model, is equipped with a governor.

**W**HEN Car No. 1 was transferred from job A to job B, car No. 2 was transferred from job C to job A. This is the same type and make of car, and the same age, as was car No. 1, except that it is not equipped with a governor. Its average gasoline consumption for the six months' period on job A was 11.1 miles per gallon, which indicates that of two identical cars on the same job, with the same driver, the governor-equipped vehicle proved to be the most economical in fuel consumption by two miles per gallon. Car No. 2, while on its old job C, had averaged for 12 months 12.5 miles (TURN TO PAGE 28, PLEASE)



*Pierce governor designed especially for A and B Ford engines*

# The Romance of Roads

A Brief Ride Over the Rutted Roads  
of the Past That Will Jolt Operators  
Into Appreciating Highways of Today

**W**HEN Barney Oldfield first roared down a road at a mile a minute two significant factors contributed to the success of his now famous ride. The first, as we all know, was motor performance. The second, to which only a few of us have given consideration, was the condition of the road. Barney could never have made that run if he had to drive over "The Street Called Straight," or the "Wilderness Trail" in the wake of our ancestors. Had he tried, he would have had what we term the "jitters."

A light commercial or heavy five-ton truck would have found the going rather difficult over any of the ancient traveled roads now as famous, perhaps, for their crudity of construction as for their historical lore. Imagine yourself trying to go places over the ancient

## Road Future is Rosy

**A** STUDY of highway transportation proves that the evolution of roads has kept pace with advances of civilization, and with scientific developments in the field of highway transportation.

Evolution is continuous and in the future we may expect such improvements in highway building and in traffic routing as will make present roads seem like tortuous trails. We can confidently expect high-speed commerce between cities, with consequent reduction in traveling time and operating cost.

roads of China or over Daniel Boone's wilderness trail. Then think of those same highways as the modern, concrete arterial routes of today. What a difference driving rapidly and in ease over modern roads in comparison to the roads commerce had to travel a thousand years ago!

**P**ICTURE yourself behind the wheel of your truck ready to travel the roads of the world just as it is told in Ford gardens at the Ford exhibition buildings at the Century of Progress Exposition. In a few minutes we will cover 19 of man's greatest highways that took 25 centuries to develop. At the exhibition, replicas of these roads of the world may be seen, each 100 ft. long. Start from the oldest known road:

**G**REAT CARAVAN ROUTE—composed of nothing but fine white sand. It is a beaten track across the Sahara desert lined with the bones of millions of dead animals, bleached and preserved through thousands of years under the burning suns. Its origin is practically ageless.

Perhaps next in age are the IMPERIAL ROADS OF CHINA. Stones of all shapes and sizes, uneven, badly spaced, slippery in wet weather. Usually used only when parallel trails become mires. Stretching from Peiping into the Western hills. Begun about 1250. Today,

1. Great Caravan Route through the Sahara Desert—oldest of known roads







**A.** Sweeping view of Exhibition Hall in the Ford exhibit. Many of the old type buggies and early cars may be seen here.

**3.** Roman road which once echoed to the tread of Caesar's legions

**4.** Canadian Plank Road introduced in Canada in 1920

however, China has 30,000 miles of modern roads.

**THE STREET CALLED STRAIGHT—** Built in Damascus, oldest town in the world. One of the earliest and most famous roads mentioned in the Bible. Made of stone blocks with gravel between.

**GRAND TRUNK ROAD OF INDIA—** Starting near Calcutta and extending 1500 miles, includes Khyber Pass over which Alexander's legions passed 40 centuries ago. Usually natural dirt beaten by the pounding feet of men and animals, and the weight of wheels, for centuries. It has been surfaced with broken stone and broken bricks

only within the last 100 years.

**ANCIENT ENGLISH ROAD—** Watling Street, built across Southern England in pre-Roman times by early Britons and later rebuilt by Romans; portions uncovered in recent years by excavation date back to 55 B.C. Now part of the Great North Road from London to the North of Scotland. This road today is part of a finely macadamized system. Beneath it rest the huge stone blocks



**2.** Grand Trunk Road of India



laid by Caesar's army of invaders.

**THE APPIAN WAY**—Started by Roman Emperor Appius Claudius in 312 B.C., running from Rome to Brindisi. Built mainly of blocks of freestone, 18 in. square, closely laid. Sections are still serviceable.

**ANTIOCH-BAGDAD ROAD**—Section of a Roman Road near Antioch reaching as far as Bagdad and once used by the legions of Caesar in their campaigns through Syria.

**BELGIAN BLOCK ROAD**—The most durable of all roads; built of care-

fully dressed granite cubes and blocks set on concrete with joints filled with cement grout. Introduced in 1600.

**LA GRANDE CORNICHE**—Military road started in 1806 by Napoleon I, with a view to the invasion of Italy. Surfaced with hand-cracked stone left loose to be consolidated by the pounding of traffic.

**WOOD BLOCK ROAD**—Originated in Eastern Europe; cross sections of trees laid on a bed of sand or gravel for cushion; interstices filled with sand. Used often throughout the world in city streets where wood is cheap and plentiful.

**CANADIAN PLANK ROAD**—Introduced in Toronto in 1835, soon spread to the United States, and in 15 years more than 2000 miles were built. The plank road has an interesting history. It was first developed in Russia. When two teams met on the plank road, it was unwritten law that the team with the lightest load turned off the plank surfacing to allow the heavier load to pass. The road was made by setting "sleepers" in the ground over which planks were laid. Earth was then stamped soundly around the ends and stringers were run at the outer edges. Over this was laid a layer of sand. Yellow pine planks were generally used, and builders figured that rebuilding would be required every seven years.

**KLEINPFLASTER PAVEMENT**—A German road made of broken rock, about three in. cubes, set on sand cushion, in oyster shell pattern. The cubes are generally laid in mosaic pattern in Germany. In Austria and Hungary they are laid in rows at an angle of 45 degrees to the direction of the road. In Rio de Janeiro is a handsome mosaic road three miles long.

**EARLY BRICK ROAD**—A good paving

brick on a sand cushion with a substantial concrete foundation. Used extensively throughout Ohio.

**COBBLE STONE PAVING**—Rounded, water-worn stones laid in sand with cement or clay binder, introduced into Mexico by the Conquistadores. Origin Germany and Spain, and used in many of the early streets of the United States.

Reproduction of one of the best examples of cobblestone pavement is that of the Cortez road, built by the peons of the great conquistadore from Ixtlan to Larumada, Mexico. Cobblestone pavement was first developed in France about 1100 and its use spread rapidly through Spain, Germany, Belgium and Holland. When the Spanish sought the conquest of Mexico and South America and needed roads they used the simplest method of their homeland.

**TYPICAL GRAVEL ROAD**—One of the first type of modern hard surfaced roads, natural gravel laid on graded pike and solidified by traffic.

**ROUTE DE QUARANTE SOUS**—The highway from Paris to Deauville, started in 1854. This is the first road on which rock asphalt was used as a binding medium. The name comes from the fact that many Frenchmen worked out their tax of "quarante (40) sous" in lieu of paying cash.

**SECTIONS** of roads which, at one time or another, were popular in the United States are the trail cut through the wilderness from North Carolina to Boonesburg, Ky., by Daniel Boone, in 1775, and the location of which is a monument to Boone's ability as a practical surveyor, and a stone road, a form of construction which first appeared in the United States in the "Lancaster Turnpike," from Philadelphia to Lancaster, Pa., in 1792.

(TURN TO PAGE 53, PLEASE)



5. German Kleinpflaster road



6. Wilderness Trail blazed by Daniel Boone



7. Lancaster Pike built in 1792



*This all-aluminum chassisless semi-trailer utilizes dead weight of side panels to bear stress and strain of load*

## A Light Chassisless 'Semi'

**First Semi-Trailer Built of Light Aluminum Alloys Marks an Important Step in Reduction of Dead Weight**

**A**NOTHER step in the industry's progress toward cutting dead weight in truck equipment has been made. It is the construction of a chassisless semi-trailer out of light-weight material.

Designing engineers will speak of it as the monocoque type, monocoque being a French word meaning "single shell." Some operators will refer to it as a frameless type. In any event the construction does away with that part of a design known as the chassis.

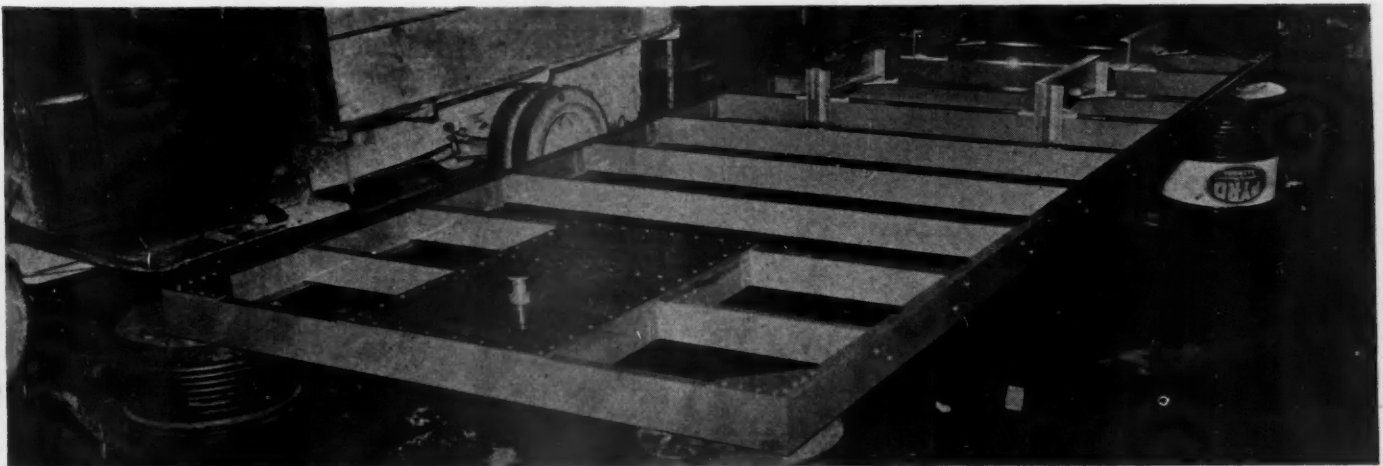
**C**HASSISLESS semi-trailers are nothing new to the industry. Experiments have been made with steel and with wood and steel. But a chassisless semi-trailer made of light, strong aluminum alloys is decidedly new. It may easily prove to be one of the greatest boons that inventive genius has given to fleet operators.

Designing of such a unit for the Baltimore Transfer Co., operating for the National Brewing Co., produced an unconventional box girder on wheels

about 40 per cent lighter than a conventional wood and steel body on an all-steel semi-trailer; 15 to 20 per cent lighter than the standard aluminum body on a steel chassis, and about 5 per cent lighter than an aluminum body on an aluminum chassis.

**T**HE chassisless unit, weighing 3705 lb. complete, is 645 lb. lighter than the former unit consisting of an aluminum body on a steel chassis. By re-

(TURN TO PAGE 52, PLEASE)



*Under-side of the sub-frame which shifts the load to the side panels*



# Will NRA Disown Trucking?

**General Johnson Is Reported Trying to Persuade Coordinator Eastman to Take Over Administration of Trucking Code**

**L**IKE the Woman in the Shoe, NRA has so many code children she doesn't know what to do. And so, she is trying to find permanent homes for many of them, where they will be given the advantages of decent upbringing.

There are about 500 of these youngsters. What to do with all of them is a problem. NRA has been giving serious thought to it.

**I**N Washington there is talk, more or less authentic, that the process of parceling out the codes will involve the shift of the Trucking Code and other transportation codes to the Federal Coordinator of Transportation. If and when that is done, Joseph B. Eastman would be the Administrator for the Trucking Code instead of General Johnson. The idea is that transportation experts should administer transportation codes, and no one denies that Mr. Eastman is an expert in transportation, at least so far as railroads are concerned. The proposal is logical, viewed superficially.

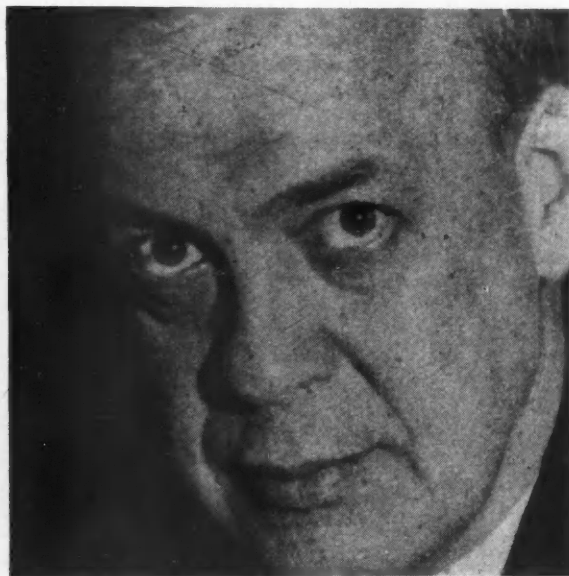
**W**HEN the Recovery Program first was launched, the idea was that all industries should be brought under codes and their administration left to the agencies best suited to handle them. The code-making period has passed. We are now in the code-administration stage, and serious effort is being made to perfect the latter part of the program so that it will do the most good.

Now, with the codes learning to shift for them-

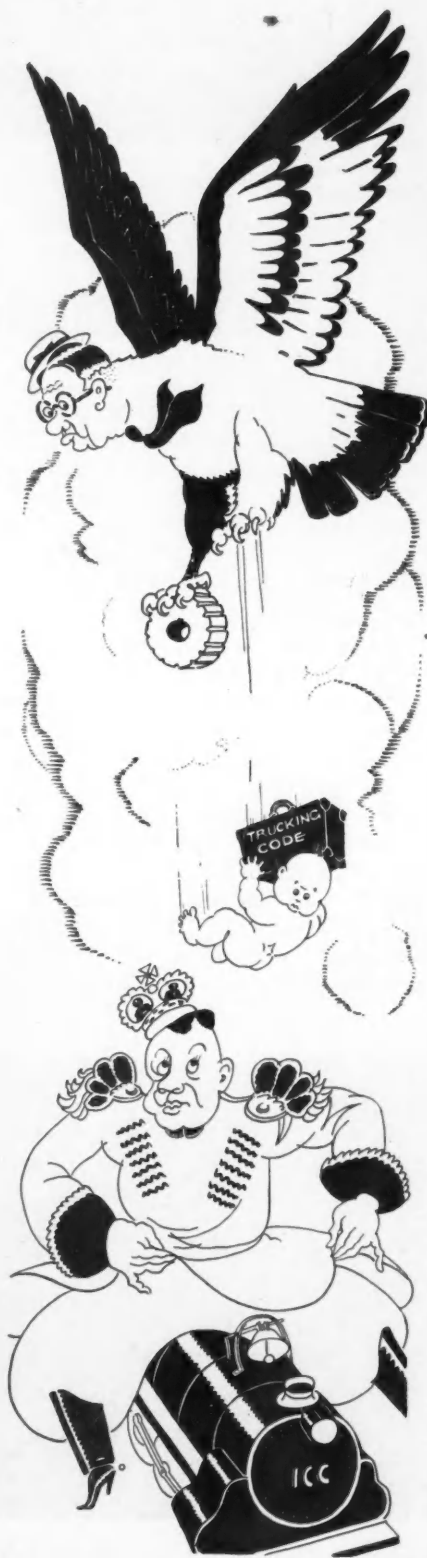
(Also see comments on page 29)

selves, NRA is wondering what to do with them. Industries are supposed to regulate themselves, with the Administrator acting as a sort of umpire to see that all the players and all sides in the game get a fair deal. Some, of course, do not respond to NRA treatment; most of them do. Some of the former type have been released—they just couldn't play ball. Several have been placed in other leagues, so to speak. For instance, as early as last year, Secretary of Commerce Harold L. Ickes was given the job of smoothing the troubled waters of the oil industry. And the Agricultural Adjustment Administration was handed the food industries codes to administer.

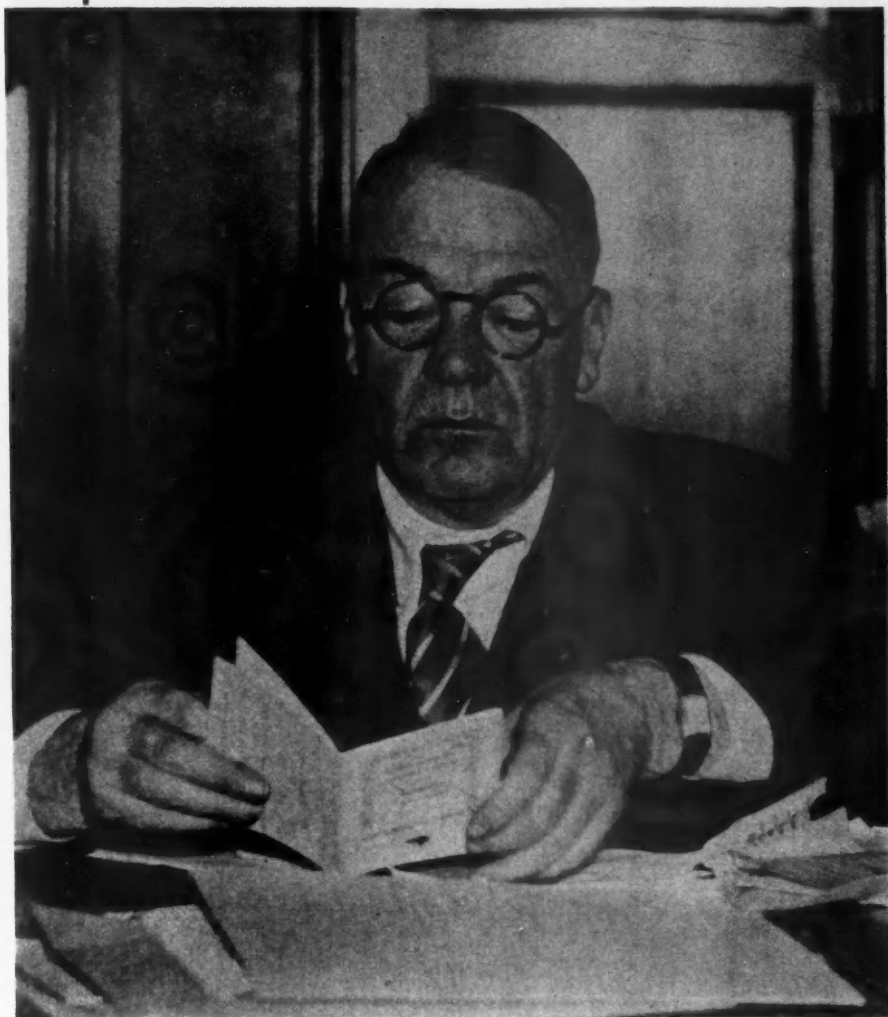
These shifts were accomplished without much comment from the knockers. There was no charge that the NRA was "cracking up." They were part of the



**Federal Coordinator Eastman**



COMMERCIAL CAR JOURNAL



*NRA Administrator Johnson*

program. And the program calls for further shifts. The outspoken, hard-hitting General Johnson has in mind turning over to other Federal agencies many of the codes for administration. But that doesn't necessarily mean that code regulation is on the way out. In many instances, it clearly indicates a strengthening of code government.

**I**T is safe to assume that transfer of the Trucking Code will not be made without the approval of Mr. Eastman himself. And what is his attitude on that question? There are reports to the effect that already he has indicated his unwillingness to take over the job. If he were to accede, he might compromise his position in respect to regulation of the trucking industry. He has recommended to Congress, and has reiterated it in subsequent speeches, that common carrier and contract carrier interstate operations be placed under Federal regulation, and that the Interstate Commerce Commission was the only body qualified to regulate the trucking industry. That is the first stumbling block, and it is probable that

the President would listen to Mr. Eastman rather than put him in an embarrassing position.

**T**HE other is that the industry, having got a taste of self-regulation, would oppose strongly any attempt to force it under control of an agency so closely allied with railroad regulation. Of course, the Federal Coordinator's office and the I. C. C. are two separate agencies, yet they are dominated by the same principles and those principles are anathema to the vast majority of truck operators.

It is true, if Mr. Eastman were made Administrator of the Trucking Code, he would act in the same capacity as the present Administrator; that is, supervisory. Yet, future developments might lead to the assumption of complete control because of his dual capacity as Federal Coordinator and member of the Commission. The tenacity with which the trucking industry is prepared to fight for the right of self-government is characteristic of other codified industries and gives force to the prediction that code regulation is here to stay, in

one form or another, despite the time limitation of the National Industry Recovery Act.

**T**O be sure, code regulation is experimental. Mr. Eastman admits that even I.C.C. regulation of the trucking industry would be an experiment. There are problems confronting the code authorities of the trucking industry—highly intricate problems—which will require considerable perspiring to work out. Mistakes have been made; many more may be expected, but that is only a natural result of any program of such far-reaching consequences. However, the spirit that the industry has displayed in cracking some of its hard nuts gives promise of a capacity for intelligent self-regulation.

**I**N the final analysis, the future of the Trucking Code rests largely with the industry itself. If it can work out its problems satisfactorily, as it has given every indication of doing, the code may be expected to continue as a permanent method of regulation. On the other hand, if it fails to display an ability and willingness to govern itself in a manner approved by the NRA, there is little doubt that the gate will be thrown wide open for Federal regulation. It is generally conceded there must be some form of regulation of the trucking industry. The "for-hire" end of trucking partakes of a public interest. If one form of regulation does not work, another may be in order.

**I**N the last session of Congress, two Federal regulatory bills died in committee—the Rayburn Bill and the Eastman Bill. The latter even failed to get a subcommittee assignment. If Mr. Eastman had insisted on action on his bill, it probably would have been brought to a vote. Did his inactivity in respect to his proposal indicate that he was willing to see what the code would do before pressing for Federal regulation? If so, the industry surely is on trial. It must demonstrate beyond doubt that, like other codified industries, it can conduct its own affairs in a manner satisfactory to all interested groups.

If not, Congress, at its next session, may be cast in the role of the old Music Master, claiming the spurned infant: "If you don't want her, I want her!"

## Governors Save 7-10% on Gas

(CONTINUED FROM PAGE 21)

per gallon, which indicates that job A was the harder of the two, either in number of starts and stops, length of sustained-speed car trips, or topography. As a matter of actual fact, job C was in a suburban town of level streets, practically all paved, whereas job A is in a suburban town 20 miles distant which is practically all hills, and with a good deal of rough, dirt roads.

**C**AR No. 3, which had been delivering 11.8 miles per gallon on job B, was transferred to job D, which is in the metropolitan limits, and requires long sustained runs from plant headquarters to outlying districts, and return, but avoiding passing through heavily congested areas. On job D it delivered an average of 15.1 miles per gallon. This vehicle is also a pick-up type, same make and age as cars No. 1 and 2, and is equipped with a governor. Job B was in a suburban district where short runs were the rule, while job D provided longer runs and permitted the governor much more opportunity in which to perform its function of limiting the maximum speed.

**C**AR No. 4, which is a 1½-ton truck, equipped with governor, proves from its results the same facts mentioned in the preceding paragraph. While car No. 4 was on job K, in a suburban district requiring but short runs, complete governor functioning was not possible, but when it was transferred to job E, in the metropolitan area, where its work required longer runs, more complete governor functioning was obtained, with a consequent increase of nearly a mile per gallon of fuel. On job K it delivered 10.1 miles per gallon, while on job E it delivered 11.0 miles per gallon.

Car No. 5, a pick-up identical in age and make to cars No. 1, 2, and 3, but not equipped with a governor, was transferred from its job F, where it delivered 13.7 miles per gallon, to job C, where it delivered 12.0 miles per gallon. Car No. 2, equipped with governor, had delivered 12.5 miles per gallon average while it was operating on job C, which shows that the governor-equipped vehicle in the same district, same job and same driver as a vehicle not so equipped, gives better fuel economy.

**T**HREE major economies may be looked for in governor-controlled trucks. During the first 20,000 miles or so of governor operation, the principle result to look for is fuel economy. Beyond that mileage a second important result may be looked for, and that is in the matter of engine overhaul. The limiting of maximum speeds is, theoretically, supposed to reduce engine wear. We have found that our average period of rebore for this make of vehicle under consideration occurs from 25,000 to 30,000 miles. We have seven governor-equipped vehicles which have reached the period at which we ordinarily rebore the blocks. To date not one of them has been rebored. They are listed below with their total mileage:

Pickup	42,000	Pickup	27,200
Pickup	35,000	Coupe	28,500
Pickup	32,700	Coupe	26,000
Station Wagon	35,000		

The third major economy is on tires as shown in Fig. 1.

**T**HE results of the next two cars are given to indicate the differences that may be, and often are, caused by either different drivers, or different territories, or by both in combination. Car No. 6 is a 1½-ton truck, not equipped with governor, and on job G in test No. 1 it delivered an average of 8.9 miles per gallon, while on job H, to which it was transferred for test No. 2, it delivered an average of 11.4 miles per gallon.

**C**AR No. 7, without governor and identical to car No. 6, while on job I in test No. 1, delivered 8.7 miles per gallon, but increased the average to 11.1 when it was transferred to job J for test No. 2. Here again, both jobs G and I are in suburban districts where

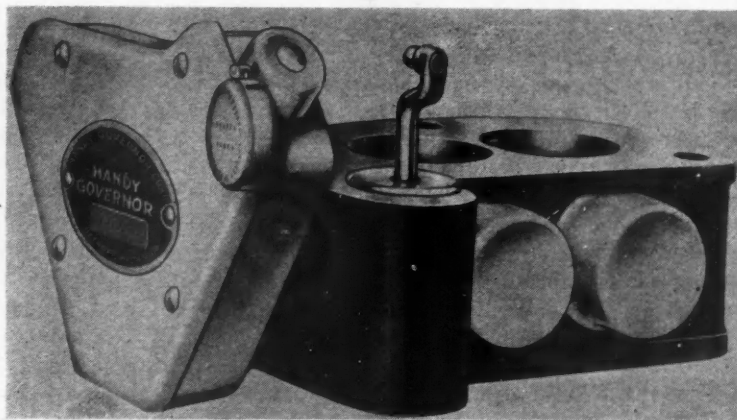
the vehicles make only short runs, while both jobs H and J are in the city limits, practically all paved streets, with runs of longer duration. Regardless of whether a vehicle be equipped with a governor or not, the vehicle which makes the longest runs at sustained speeds obtains the best fuel economy.

Car No. 8, a pick-up identical to the others listed in this test, but about 16 months younger in age, was purchased about the time test No. 1 was concluded, and was assigned to job F when car No. 5 was transferred to job C. Car No. 8 delivered an average of 13.6 miles per gallon on job F, compared to the average of 13.7 miles per gallon delivered on the same job by car No. 5. Car No. 8 is not governor equipped.

**I**T will be seen from the above comparisons that only three of the governor-equipped vehicles were transferred to other jobs for this test, the reason being that at the time the test was started it was not practicable from other operating standpoints to transfer any more, and it was felt that these three vehicles were most accurately representative of the actual daily working conditions under which the vehicles operated, and would provide the fairest basis of comparison. The two governor-equipped vehicles which operated on jobs on which non-equipped vehicles were also operated, both produced savings in fuel consumption over vehicles not equipped with governors.

**A** GENERAL average of the eight vehicles involved in the above test shows that as a group the three governor-equipped vehicles averaged 13.0 miles per gallon, against 11.8 miles per gallon for the five not-equipped vehicles. The two pick-ups equipped with governors averaged 14.1 miles per gal., compared to 11.4 miles per gal. average for the two pick-ups which did not have governors.

**T**HE third test will consist of operating a group of governor-equipped vehicles for a period of six months, and comparing the results to the results of operating the same group of vehicles with the governors removed, for a period of six months.



A Handy governor unit



# AFTER HOURS

Editorial Comments

Should the Trucking Industry Favor Mr. Eastman as Its Code Administrator?

By **GEORGE T. HOOK**

Editor, Commercial Car Journal

**I** HAVE a habit of reading carefully every public statement made by Joseph B. Eastman, Federal Coordinator of Transportation, that I can lay my eyes on. All his statements indicate he is anxious to have everyone feel that in approaching the problem of coordination he will be nothing but fair to all agencies of transportation. In working out a new deal for transportation he wants you to believe that it will be a square deal for all concerned.

In his statements he has revealed a high regard for highway transportation. He has criticized railroad management. He has found fault with the Interstate Commerce Commission. Nowhere will you find a phrase that reveals the fanatic, nor an idea that exposes the idealist.

**I** DON'T know him personally. I've never met him. I've never sought an interview with him because he never seemed to be concealing anything. I've always felt that I knew just where he stood on questions involving motor trucks. I thought his action in running to the late Congress with a bill to regulate trucks operating in interstate commerce was ill-advised. And I have suspected that his advisers thought it a strategic move to checkmate the trucking code. But that did not unseat me on his sense of fairness, because his move was not intended to be harmful to trucking.

**F**OR a time I deserted the Eastman bandwagon. I felt he was letting his sympathy run away with his judgment in proposing to centralize control of all transportation agencies in the Interstate Commerce Commission. But he set everything straight the other day when he said he knew the I.C.C. wasn't a perfect institution and that, like the railroads, it was in need of renovation, but that it was better to renovate a time-honored institution than to build a new one without any guaranty that it would be better. That makes sense. And to me it means that whatever renovation is effected will be for the purpose of guar-

anteeing the highway transportation interests and other railroad competitors that their fate will not be in the hands of a packed jury of railroad-minded men, some of whom are in a highly fossilized state.

**W**ITH this as a background it will appear natural that when I got wind of the report (see page 26) that General Johnson was working on Mr. Eastman to take over administration of the trucking code, I thought it wasn't such a bad idea. Hear me out before you disagree.

I'm not thinking of it as a good idea from Mr. Eastman's point of view. My reasoning involves him, but my purpose is solely to show that the idea has merit from the trucking industry's viewpoint.

**W**HAT is the purpose of the trucking code? Briefly it is to put for-hire trucking on a stabilized, profitable basis. But it has other important purposes. It will make possible the gathering of all kinds of figures and data, showing for the first time the magnitude of the industry and the conditions that prevail. These facts largely will influence the sort of regulatory action which the Federal Government will take.

And Federal regulation is inevitable. The code, of course, affords self-regulation, and there are those who think that self-regulation will be perpetuated in one form or another even after the National Industrial Recovery Act has expired. But that hope is not shared by men who are not affected by selfish influences.

The expiration date of NIRA is June 16, 1935. Congress will go into session early in January. By that time administration of the trucking code will have produced a mass of evidence and resulted in a mass of opinion which will be used in the formulation of a Federal regulatory bill.

**T**O whom will the Federal Government look for guidance? To its Coordinator of Transportation—Mr. Eastman—of course. The way Mr. Eastman feels

now he will "reinforce and renew" his recommendations for centralized control of transportation at the next session of Congress. What better then than that his thinking should be influenced by first-hand knowledge of the complicated conditions within the for-hire trucking industry? As Administrator of the trucking code he would be exposed to a liberal education in the actual conditions—good and bad—within the industry. Guided by this first-hand knowledge Mr. Eastman, in his capacity as transportation adviser to the Federal Government, could be depended on to make recommendations which would preserve the good and eliminate the bad.

**T**HE present NRA administrative setup on the trucking code is not one that is likely to benefit the industry. General Johnson is the Administrator, but he's got a million things to do. The trucking code is only one of 500 codes to him and probably a relatively unimportant one in his opinion. The Deputy Administrator for the trucking code is expected to master the problems of the industry, but he also has the motion picture business to worry about. He's not a specialist in transportation. It's a question whether his interest in it extends beyond going through the motions of holding down a job.

Mr. Eastman is a specialist. More than that he recognizes the trucking industry's problems. As code administrator he would come to know the industry as he should know it in order to prescribe fair and beneficial Federal regulation.

**T**HERE could be no greater proof of mutual faith in each other's intentions than for the industry and Mr. Eastman to collaborate in developing facts on which to base regulatory conclusions.

The Coordinator might argue that acceptance would, tactically, put him in a pocket.

Well, he would have to decide whether tactics come before ethics, which his professions of fair treatment have led everyone to believe is his guiding principle.

# Black-Sheep Chauffeurs

There Are Six Types of Drivers a Fleet Operator Must Watch and Correct in Order to Reduce Accidents

By **J. RUSSELL CRAIG**

Safety Director  
Pennsylvania Indemnity Corp.



**T**O further reduce accidents, six types of drivers must be eliminated from our ranks. When the driver is responsible, the accident may be classified as due to one of these six types. They are the ignorant driver, the criminally minded driver, the hopeful driver, the bluffer type, the accident prone driver and the unsafe speed driver.

The ignorant type of driver is one who does not know the motor code. Until he does he should use common sense in driving because the code is based on common sense. The slang equivalent of common sense is "horse sense." "Horse sense" is the divine gift given to man to keep him from making a jackass out of himself. Therefore, when a person does not drive using common sense, in the eyes of intelligent persons he acts like a jackass. In other words, if the driver should use a little "horse sense" in driving the horse power under the hood, he would have fewer accidents.

**A**N ignorant driver also does not know the signal code of his state. To cover up this ignorance a lady one time had an accident in which the right rear fender of her car was crushed into the body like an accor-

dion. In her phraseology this fender had a "permanent wave."

When asked by her husband why she didn't signal when making a left turn, by extending the hand and arm beyond the side of the body of the car, she replied, "If the other driver couldn't see my car how could you expect him to see my hand."

**W**ITH the criminally minded driver, I am reminded of the story of a man following an intoxicated driver. The intoxicated driver mistook a concrete culvert for a side road, hit it, and was catapulted through the top of his car. The motorist behind rushed to town, dashed into a doctor's office and said, "Oh, Doctor, bring your first aid kit, there is an unconscious man in the field just out of town."

"I am sorry but I cannot help you," the doctor replied.

"But, Doctor, you may save a life," continued the other man.

"Sorry, sir, but I am not the kind of a doctor you think. I am a veterinarian."

"Fine," said the other man, "you will do because no one but a jackass would drive that way."

**A** HOPEFUL driver is one who approaches an intersection hoping that no cross traffic will be there. Just as his car reaches the beginning of the intersection he sees a car to his right. One-half second of reaction time sets in. Twenty miles per hour means approximately 30 ft. per second. One-half second of reaction time carries the vehicle fifteen ft. into the intersection before the brakes begin to hold. If this is a 30 ft. intersection the car is half way across. Thus we have unsafe speed even at 20 miles per hour which causes many accidents on our roads today.

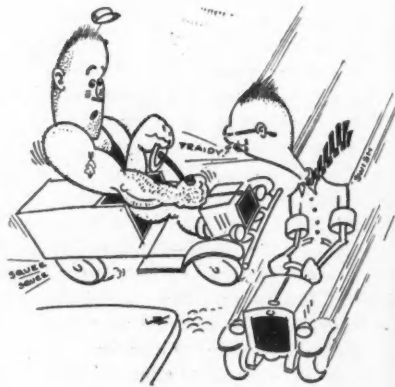
**I** WOULD rather have motorists traveling 60 miles per hour knowing the facts referred to above than the young fellow who goes poking along at 20 miles per hour on our main highway, with his girl's head on his shoulder, one hand on the steering wheel (now I am going to fool you) using the other hand to point out the beauties of nature.

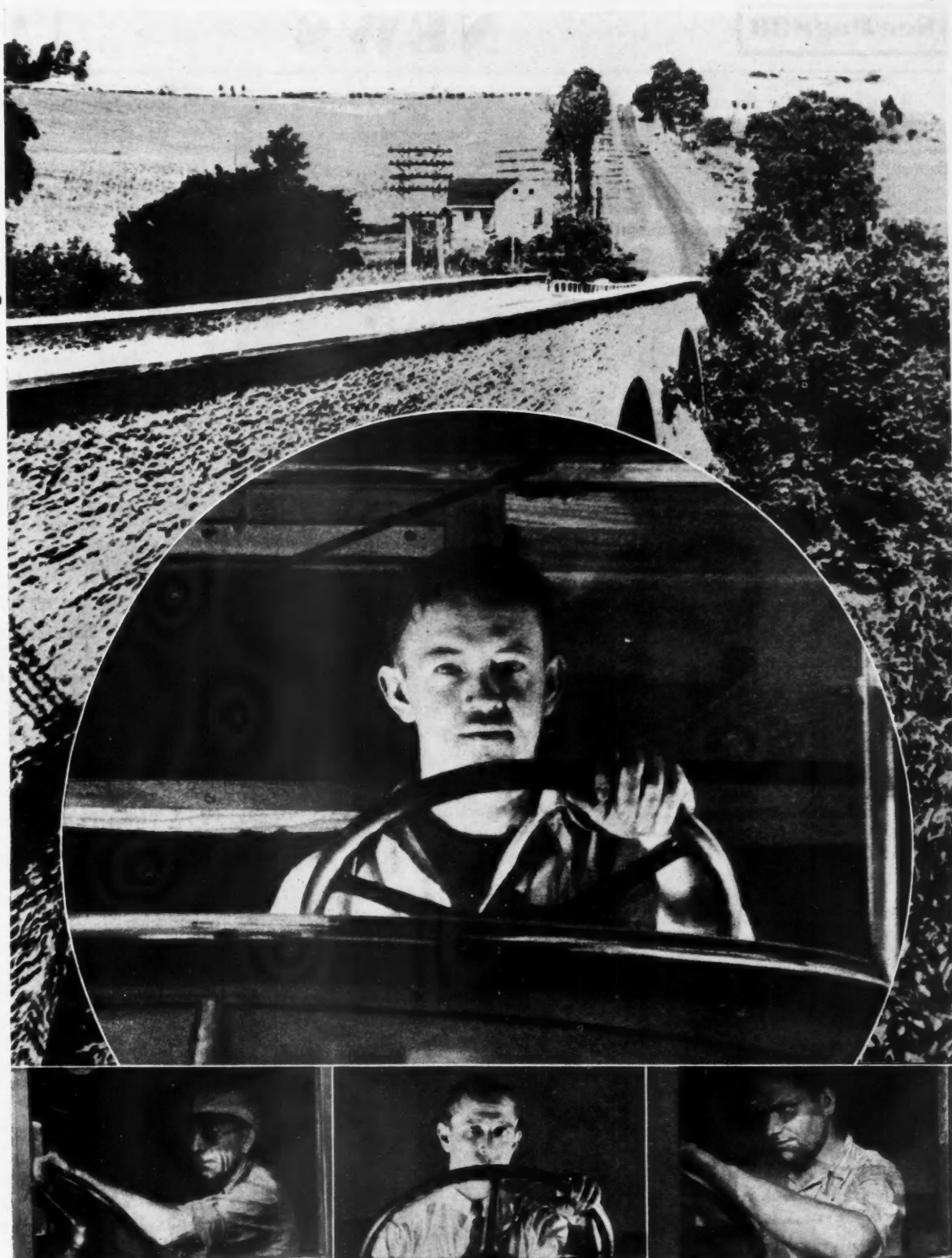
A young man was traveling with his girl friend with one hand on the steering wheel and the other around the girl. A motorcycle officer drove up to his car and yelled, "You better use both hands." "Sorry, Officer," said the young man, "but I ought to have one on the wheel."

**T**HEN there's the bluffer type of driver illustrated by the taxicab driver who endeavored to beat a competitor's cab at an intersection. When he got across safely because his competitor stepped on the brakes, instead of the accelerator, he turned to his passenger and said, "I *thought* he was yellow!"

**T**HE accident prone driver is one who has a series of small or large accidents or even near accidents. They may be caused by two defects:

1. A physiological defect such as





*These men are truck drivers with steady jobs and good safety records. Yet you couldn't have known this just by looking at them. Only their records can speak for them. It's up to the fleet operator to keep records, to determine which of his drivers are of the "Black Sheep Chauffeur" type, and take such action as will safeguard the public*

nearsightedness would cause a driver to miscalculate the extent of his vision.

2. The psychological type permits anger to control his driving as illustrated by the taxicab driver who, prematurely, through anger, shut the rear door of his cab on a woman passenger's right hand, removing three fingers therefrom.

**T**HERE is one other type known as the unsafe speed driver. Mind, I did not say the speedy driver. There are three reasons why the unsafe speed driver is dangerous. They are:

1. Failure to know how many feet per second an automobile is traveling at any given speed. For instance, a car going 60 miles per hour covers 88

ft. in. one second of time. When you consider the average passenger automobile weighs a minimum of 2300 pounds, it means that you are practically driving a ton of steel at 88 ft. per second.

If you wish to know within two feet of accuracy how fast an automobile is

(TURN TO PAGE 52, PLEASE)



### Trucker Asks Exemption

A public hearing was held recently to study the request of the Georgia Highway Express, Inc., Atlanta, that it be exempted from the trucking code. H. L. Spring and E. H. Garrett, executives of the firm, stated that Georgia highway commission rulings reduced rates 27 per cent while the code was increasing operating costs to 25 per cent. Assistant deputy administrator Charles L. Dearing conducted the hearing. Thomas O'Brien of the A. F. of L., and Fred Tobin, labor advisor, also appeared. Decision was withheld.

### Dodge 272% Up for Half

Sales of Dodge trucks for the year to date (January 1 to June 30) showed an increase of 272.5 per cent, or 22,423 truck deliveries as against 6019 made during the same period last year.

### Olen On Safety Body

Walter A. Olen, president of the Four Wheel Drive Co., was recently appointed to serve on Governor Schmedeman's committee on street and highway safety for the state of Wisconsin.

### Staehling Back in Philly

Sterling Motor Truck Co., Inc., Milwaukee, has appointed H. O. Staehling president of its Philadelphia sales division, the East Penn Motor Truck Sales Co., of which he was manager for twelve years, from 1919 to 1931.

### Perfex Organizes

The Perfex Radiator Co. has taken over the assets of the Perfex Corp. of Milwaukee, according to an announcement from Julius K. Luthe, president of the new company. A program to enlarge the line of heavy-duty engine cooling radiators is planned.

### First Eagle to Champion

Champion Spark Plug Co. has been awarded the first blue eagle issued by the code authority for the automotive parts and equipment manufacturing industry.

### A. V. Comings

Arthur Vernet Comings, whose informative and inspirational articles endeared him to thousands of automotive retailers when he was editor of *Automobile Trade Journal* (1924-1929), died in Detroit June 26. At the time of his death he was editor of several merchandising services to dealers and salesmen of the Plymouth Motor Car Co.

### Arthur Macy

Arthur Macy, credit manager for the Raybestos division of Raybestos-Manhattan, Inc., died suddenly at his home in Bridgeport, Conn., on June 22. He was with the company 25 years.

### Promoted by I H C



Albert A. Jones and Edwin A. Johnston

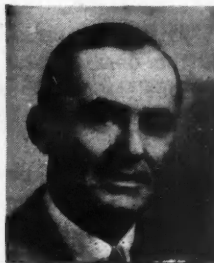
(See item on page 9)

## 166,491 Are Registered Under Trucking Code

Trucking Code registrations continue to come in at an increasing rate despite the fact that the expiration date set by General Johnson was June 28. Registrations received up to June 28 totaled 137,819, and in the following week, ending July 6, totaled 166,491, an incoming rate of approximately 5000 a day. Below are shown registrations by states as of July 6:

Ala. ....	1,051	Neb. ....	800
Ariz. ....	496	Nev. ....	185
Ark. ....	553	N. H. ....	875
Cal. ....	16,127	N. J. ....	4,487
Colo. ....	2,056	N. M. ....	*
Conn. ....	1,605	N. Y. C. ....	7,352
Del. ....	965	N. Y. ....	8,000
D. C. ....	370	N. C. ....	1,550
Fla. ....	518	N. D. ....	375
Ga. ....	1,114	Ohio ....	11,300
Idaho ....	899	Okla. ....	1,238
Ill. ....	13,408	Ore. ....	1,653
Ind. ....	3,161	Pa. ....	21,900
Iowa ....	3,150	R. I. ....	1,400
Kan. ....	1,850	S. C. ....	3,260
Ky. ....	1,351	S. D. ....	700
La. ....	519	Tenn. ....	1,115
Me. ....	7,193	Tex. ....	1,772
Md. ....	2,771	Utah ....	381
Mass. ....	4,385	Va. ....	3,943
Mich. ....	7,789	Vt. ....	327
Minn. ....	3,800	Wash. ....	738
Miss. ....	458	W. Va. ....	1,786
Mo. ....	8,926	Wis. ....	5,229
Mont. ....	798	Wyo. ....	738
* No Report		Total ....	166,491

W. W. Costello who has been appointed assistant sales manager of the Federal Motor Truck Co.



### Moving Code Hearing Stayed

The hearing on the question of classification of vehicles used in the transportation of household goods and office equipment under the provisions of the trucking code and of the Household Goods Storage and Moving Trade Code, originally scheduled for June, was postponed until July 17 by Administrator Johnson. The order also stays the provisions of the two codes providing for registration and classification of vehicles.

### P.M.T.A. Reelects Rodgers

Ted V. Rogers was reelected president of the P.M.T.A. for the third consecutive time at the association's annual convention in Pittsburgh last month. Other officers elected were A. D. Aldrich, treasurer; Edward McCrady, secretary, and William A. Sutherland, general manager. Problems relating to the code, safety and national state legislation were discussed at the meeting.

### Twin-Flex Expands

The Twin-Flex Co. announces the removal of its plant from Detroit to Milwaukee where larger quarters are available for increased production of third axle units for Fords and Chevrolets.

### IHC Opens No. 7 in N. Y. C.

A new sales and service branch, the seventh in the metropolitan district, has been opened by the International Harvester Co. in New York City. Twenty-four-hour service is being maintained. P. A. McLaughlin in charge.

### Fruehauf Opens Branches

G. W. Chamberlin, vice-president and director of sales, Fruehauf Trailer Co., announces the opening of factory sales branches at Kansas City, Mo., and Peoria, Ill. C. B. Caswell takes charge at Kansas City, and W. R. Evans at Peoria.

### Bendix Appoints Distributor

The Electric Equipment Co., Los Angeles, has been appointed Southern California distributor of the entire line of Bendix products by virtue of its having acquired assets of the Pacific Automotive Service of Los Angeles.

### Cadillac Branch Handles Trucks

General Motors Trucks model T-16 1½ to 2-ton light-duty is being handled by the Philadelphia branch of the Cadillac Motor Car Co.

### Anderson Opens Offices

George Potter Anderson has opened offices as consulting engineer in Detroit. He was until recently director of sales engineering with Dodge Brothers, and prior to that, chief engineer for Graham Brothers Truck Co.

# New Products on Parade

## Descriptions of the Latest Items Put on the Truck Market by Equip- ment and Specialty Manufacturers

### Simmons 2½-Ton Jack

The Simmons Silver King line of hydraulic jacks now includes a new 2½-ton model especially designed for Ford and Chevrolet trucks. The starting height is 8 in. and the lift 6 in. Model T-2½ is without screw extension and Model T-2½-S includes a 3 in. screw extension. Descriptive catalog on request.

### R-M Grease Fitter

Rinck-McIlwaine, Inc., 16 Hudson Street, New York City, announces a new universal grease fitting tool. Rimac 51 has a spiral extractor to remove sheared-off fittings, a four-way spanner to fit all pin type alemites, a slotted double hex socket wrench for all straight and off-set types, and a rethreader standard tap to renew damaged threads—all in one.

### Simplex Piston Resizer

The Simplex Piston Ring Company announces the micro slap-check piston resizer—an improved device that does not force the skirt out against the piston wall, but resizes and holds it to its exact desired clearance. It is easily installed, is adaptable to thick or thin wall pistons, and to cast-iron and aluminum.

### Combustion Tester

A motor fuel combustion tester designed to make an accurate and visual record of motor efficiency in a little more than a minute is announced by Lantz-Phelps Corp., East Third Street, Dayton, O. This unit okays motor's performance or indicates trouble that can be traced to carburetion, ignition system, faulty valves, piston rings, compression, timing or vacuum system.

### Schrader Pencil Gage

A pencil-type tire gage calibrated from 10 to 50 pounds for testing tire pressures



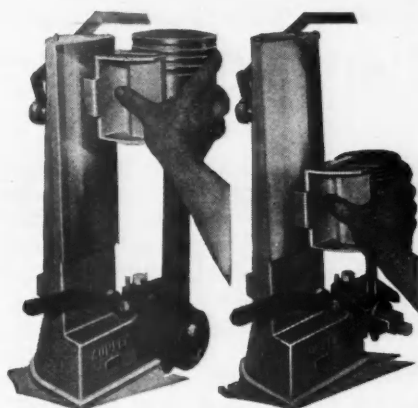
is now produced by A. Schrader's Son, Inc., Brooklyn, N. Y. The pencil is finished in chromium, is calibrated on four sides and is built on the direct action principle. The unit is attractive, accurate, and convenient to carry.

### Sunnen Rod Aligner

Quick-check rod aligner, a product of the Sunnen Products Co., 7917 Manchester

JULY, 1934

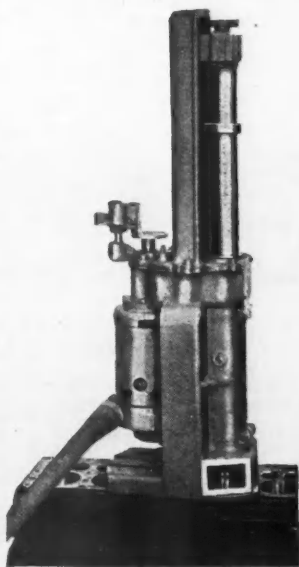
Avenue, St. Louis, is designed to check any size rod assembly, without change, for



bend, twist, and off-set in 10 seconds. Instant operation is effected by eliminating the use of special mandrels for different size rods. The instrument is not affected by tapered or cam ground pistons.

### Hall Boring Bar

Hall Mfg. Co., Toledo, announces an improvement in boring bar construction with production of their new model 400 boring bar unit. The outstanding improvement is its self-contained vacuum system driven by the same universal motor that drives the bar itself. This feature is designed to



prevent dust and cuttings from getting into the motor of the car.

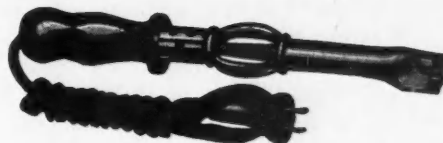
The new boring bar is made in a domestic range of 2½ to 4 9/16 in. with a cutting depth of 12 in. and 300 r.p.m. speed.

### Toledo Inserts and Springs

Toledo Steel Products Co., Toledo, announces two new products with the production of chro-mo-loy valve seat inserts and valve springs. The seat inserts are made with heat-resisting properties and they stay in place without cement or mechanical aid. Expansion conforms to that of the cast-iron cylinder block. The valve springs are engineered for high-compression motors. Springs are made from quality wire, are machine coiled and tested, and heat treated.

### Kwick-Kut Groover

"Tire Jockey," a new tire groover line heating unit is being produced by the Kwick-Kut Mfg. Co., 3840 Arsenal St., St. Louis. This unit, using a 150-watt element, is claimed to be hotter and faster than



others in the same price range, and is furnished with regular Kwick-Kut blades and sharpening stones. All models sell for under \$10.

### Magnolia Bearing Bronze

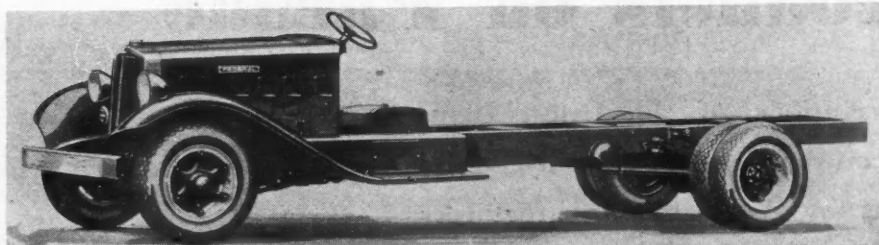
A new form of bearing bronze is the semi-finish (outside and inside) bearing bronze bar stock made by the Magnolia Metal Co., Elizabeth, N. J. Semi-finishing the inside of the bronze bushings as well as the outside, thus assuring better tooling. The bronze is furnished in standard 12, 13, and 14 ft. lengths.

### Ramco Piston Expander

Production of the Ramco piston skirt expander is announced by the Ramsey Accessories Mfg. Co., 3701 Forest Park Blvd., St. Louis. The feature of this unit is its flexible support for alloy pistons giving the piston a "backbone." This new type "U" expander is primarily for the Ford V-8 piston which receives much punishment from the high-speed motor. The manufacturers claim that the Ramco expander not only reshapes the collapsed piston but also provides oil control.



## . . . . New Products on Parade . . . .



*New Federal Model 50, 4½ to 5-ton with gross capacity of 22,000 lb. available in eight wheelbase lengths*

### Federal "50" at \$3,075

**T**HE Federal Motor Truck Co. has started production on a new heavy-duty 4½ to 5-ton model. Known as Model 50, it has a maximum gross capacity of 22,000 lb. and lists at \$3,075, f.o.b. Detroit.

In appearance the Model 50 is characteristically Federal. The radiator shell, bumper, headlights and twin horns are chrome-plated.

The heavy-duty, six-cylinder, L-head engine has seven main bearings, a bore and stroke of 4¼ x 4¾ in., and develops 90 hp. at 2400 r.p.m. The maximum torque is 274 ft. lb. at 800 r.p.m. Piston displacement is 404 cu. in. Other engine features include aluminum alloy pistons, valve seat inserts, built-in mechanical fly-ball type governor, gear-driven water pump at side of cylinder block, full-flow type oil filter and air cleaner. The rear axle is a full-floating, double-reduction type. The fish belly frame has a maximum depth of 10 in.

Service brakes are Lockheed four-wheel hydraulic with vacuum-type booster. The emergency brake is the Tru-Stop, double-shoe, disc type.

Standard tire equipment is 9.00/20, 10-ply balloon single front and dual rear. Eight wheelbase lengths are available, as follows: 153, 163, 175, 185, 197, 210, 223 and 237 in. Standard chassis finish is red lacquer.

#### New Trailer Axles

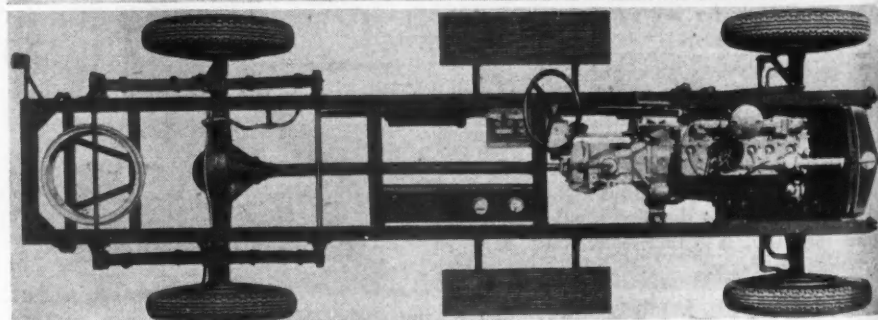
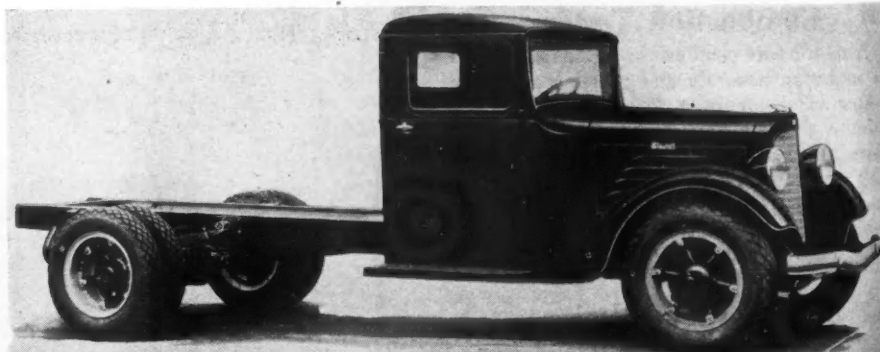
**T**HE Timken-Detroit Axle Co. announces a new series of tubular trailer axles. Several important detail changes of design have been made. The new axle is an all-steel integral unit with tubular beams of tempered steel. Spindles are larger and are made of special alloy steel, machined to accurate dimensions. With this increase in size, spindles are brought into

correct proportion with the tubular beam. Other important changes in the wheel assembly are the new series Timken bearings, more widely spaced to give greater wheel stability. Heavier brake drums provide better braking.

### Stewart's New 1½ & 2-Ton Models List at \$695 & \$895

**S**TEWART MOTOR CORP. announces new lower-priced 1½-ton and 2-ton models at \$695 and \$895, f.o.b. Buffalo, respectively.

The 1½-ton Model 46H comes in wheelbase lengths of 134, 145, 160 and 176 in., permitting a body as long as 12 ft. The 2-ton Model 47H has an additional wheelbase of 190 in., permitting a 14-ft. body.



*Above—Stewart's new Model 47H 2-ton chassis and cab. Below—A birdseye view of Model 46H 1½-ton*

Both models feature the following: six-cylinder engine with removable block, side-mounted water pump and steel valve inserts; downdraft Stromberg carburetor; latest type Spicer roller bearing universal joints and shafts; Ross roller-mounted steering gear; full-floating rear axle; hydraulic four-wheel brakes with emergency brake on driveshaft.

The engine of the smaller job has a 3¼-in. bore and 4½-in. stroke. It develops 62 hp. The engine in the larger model is larger in bore—3¾ in.—and develops 65 hp.

Both take 6.50-20 heavy-duty tires. The 2-ton comes with duals in the rear.

### GMC 3-ton at \$925

**T**HE most recent addition to the GMC line is the T-23, 3-ton model at \$925 f.o.b. Pontiac.

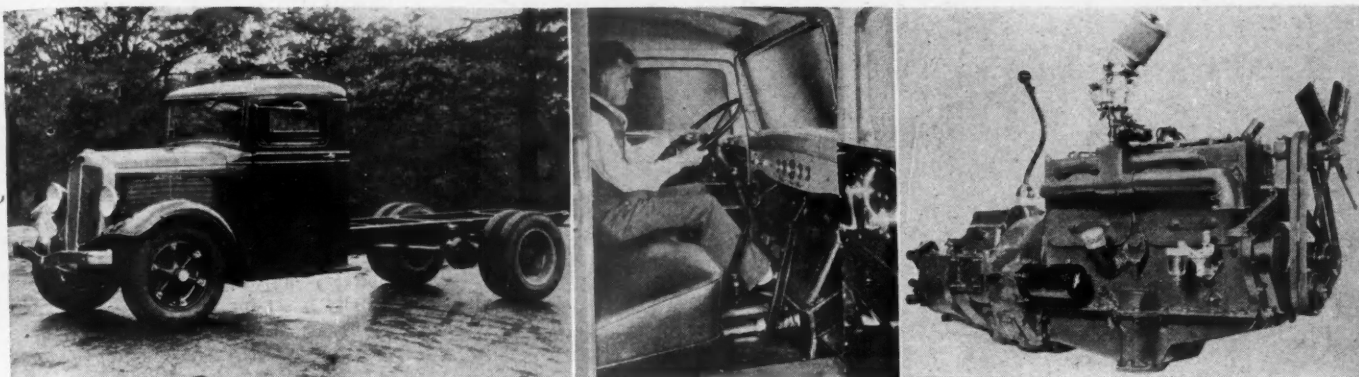
The T-23 has a valve-in-head engine. A counterweighted crankshaft has four main bearings of the removable, steel-backed, precision type. It is also equipped with a harmonic balancer. Other engine features include downdraft carburetion, cylinder head of special chrome nickel iron, positive pressure lubrication, thermostatic temperature control and crankcase ventilator.

Chassis frame has a depth of 8 in. Rear axle is of the full-floating type with roller bearings throughout and a straddle-mounted pinion.

Gross capacity of the T-23 is 12,500 lb., and the chassis is available in three wheelbase lengths—142, 166 and 184.



. . . . New Products on Parade . . . .



Left to right—New White truck chassis Model 712; roomy Cab design, and Model 712, 6-cylinder 90-hp. engine

## White Adds New K Models

**Model 712 at \$2550 with Entire  
New Engine is Rated at 17,000  
lb. Gt.V.W. Model 707 at \$1790**

**W**ITH the introduction of two new truck models—712 and 707—The White Co. is in the unique position of being the first truck builder in this country to offer a fully rounded line featuring a weight distribution of 1/3-2/3.

The White Model 712 has a gross weight rating of 17,000 lb. and a nominal rating of 2½ to 3½ tons. It has a list price of \$2,550 and is furnished in a range of wheelbases running from 130 to 190 in., making possible the use of bodies as long as 15 ft.

Model 707 is introduced to meet the need for a chassis having large carrying capacity with a small economical engine which seems to be desirable for light tractor-semi-trailer and six-wheeler equipment operating on long-distance hauls. It has a G. V. W. rating of 15,000 lb. and is listed at \$1,790. A replacement engine service is available on this model which insures the operator against being penalized on block renewal when further cylinder reconditioning is not possible.

Both new models, as well as the other models in current production, are equipped with a newly designed cab which is wider, more roomy, and greatly improved in appearance. The directional ventilation system, used on former models, is incorporated in this

design, adding to driver comfort. As in the original "K" series, weight redistribution is accomplished by moving the cab forward so that the engine projects partly into the cab. The engine shrouding within the cab has been improved and more leg room provided.

Weight distribution is sensibly 1/3-2/3, although not precisely in that ratio due to a slight increase in cab length. However, it approaches ideal distribution conditions and thus permits a more economical use of tire equipment. In fact, in some cases smaller tire sizes may be used with a consequent saving in first cost.

The Model 712 has an entirely new engine, 9A, of 3 25/32 in. bore and 4½ in. stroke, six-cylinder L-head construction. It has a displacement of 303 cu. in., develops 90 hp. at 2800 r.p.m. and has a torque rating of 204 lb. ft. The engine features a seven-bearing, heat-treated, counterweighted crankshaft, balanced dynamically and statically. Steel-backed bearings are used in both main and connecting rod bearings. Three-point suspension with rubber mountings all around is provided.

Full-pressure lubrication and the improved White screwed-in exhaust valve inserts are among the other features. Full-flow oil filter and a vacuum-type governor are standard equipment.

An all-metal helical gear train is used at the front end. The generator is belt-driven by a double belt and in turn drives the water pump, which is located accessibly at the rear on the left side. In the interest of accessibility, a down-draft carburetor is used in conjunction with an oil-wetted air cleaner.

The Model 712 is equipped with a single-plate wet clutch and the standard White five-speed transmission with direct on fifth. As an option, at slight extra cost, a new five-speed transmission can be supplied with direct on fourth. A full-floating, banjo-type rear axle is standard. Four-wheel, hydraulic brakes with a vacuum booster, together with a vacuum reservoir, are provided.

The Model 707 uses the same engine and transmission as the Model 702, which was announced last year, but is heavier all around, being equipped with larger front and rear axles, springs and frame. The engine is six-cylinder, 3 5/16 by 4 5/8, having a displacement of 240 in. It develops 68 hp. at 2800 r.p.m. and has a maximum torque rating of 152 lb. ft.

Clutch is single-plate, dry type; transmission four-speed. The service brakes are four-wheel, hydraulic, with a reaction-type booster. Rear axle is the same as used on the Model 712.

## . . . . New Products on Parade . . . .



*Phantom view of a McCord installation which uses Petrogas as a refrigerant and as a fuel*

### McCord's Petrogas System

**T**HE McCord Radiator & Mfg. Co., Detroit, announces the completion of development work on a system which uses Petrogas (a hydrocarbon distillate similar to propane) both as a refrigerant and a fuel. McCord is exclusive licensee as the result of an agreement with Shell Oil Co.

Petrogas has an extremely high octane rating and can be bought at approximately the same price as gasoline, on a performance basis.

One of the first trucks to be equipped with the system is in the service of S. Lowenstein & Son, Detroit meat packer. The truck is illustrated. The refrigerating compartment measures 6 ft. x 6 ft. x 11 ft. and is kept between 42 deg. and 46 deg. on a typical run, when the official thermometer is hovering around 94 deg., which probably means that it is 7 deg. to 10 deg. higher on the street. The daily report from which these figures are taken gives the time of leaving the warehouse as 11.10 a. m. The trip occupied 410 min. The engine idled 130 min. or 31 per cent of the time and was under load 280 min. or 69 per cent of the time. Sixteen stops were made during the 120-mile trip.

The fuel is carried as a liquid at a pressure of 135 lb. in the twin cylinders "A" (see illustration) each containing approximately 23 gal. From these cylinders it is led upward to the heat exchanger "B," where the atmospheric heat of the liquid

is removed. It then passes through the expansion valve "C" from which it issues into the evaporator or cooling unit "D" as a saturated gas. Heat absorption is effected and the truck body is thereby refrigerated. The gas leaves the evaporator in a perfectly dry state and passes through the heat exchanger "B," where it absorbs the heat of the incoming liquid fuel as mentioned before, and then it passes through the diaphragm regulating valves "E" and "F," where in two stages the pressure is reduced to atmospheric. The dry gas then passes to the mixing valve, and from there directly to the intake manifold.

It should be noted in connection with this system that the amount of refrigeration created is in direct proportion to the quantity of fuel consumed by the engine and is equivalent to 180-185 B.T.U. per lb. of fuel.

#### Ford Valve Holder

A new valve holder, which makes possible a Ford valve grind job in record time and which can be used with any standard grinding tool whether mechanically, electrically or hand-operated, is produced by Star Products, Inc., 15105 Darwin Avenue, Cleveland. Center holes permit attaching valve holder to the end of handle with a staple. The holder snaps on to the edge of the valve and grips it with ample clearance to the motor block.

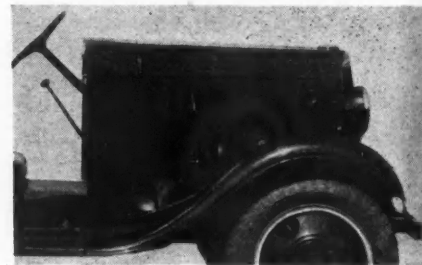
#### Pedrick Ridge Reamer

The Pedrick ridge reamer has been added to the group of piston ring service units produced by the Wilkening Mfg. Co., Philadelphia. The important feature of this reamer is that the one tool is adjustable to all cylinders from 2½ to 5-in. bore.

The reamer consists of a heavy shaft, on which are mounted two plates, a cutter, an adjusting screw and an operating handle. The cutter is adjustable for depth of cut and usually is set for a cut of from .005 to .010 in. The tool may be set in short order to be used on cars, trucks and tractors within its range of adjustment.

#### Chevrolet Adds Flat Cowl

Truck buyers may now obtain Chevrolet 112, 131 and 157 wheelbase models with flat-faced cowl. The new design permits the use of a Chevrolet chassis with any custom body built for a flat cowl. On trucks of the three wheelbases listed, the flat-faced cowls give respectively the following distance from the face of the cowl and the rear end of the frame—104 7/16, 124 5/16, 150 5/16 in. The design is particularly adaptable for single-unit refrigerator bodies, public utility construction bodies and contractors' dump bodies.



*Chevrolet flat cowl design*

#### Portable Utility Spray

Earl Webber Co., News Bldg., Chicago, is manufacturing Port-A-Sprays, a portable unit that may be used with oil or water for cleaning windshields, spraying springs, cold water painting, etc. The entire line is comprised of a special windshield spray, a general spray and a combination spray for lacquer or oil solvents. The manufacturers claim that it is corrosion-proof and clog-proof, and that it possesses full compressor capacity.



*This semi-trailer with such streamline features as full skirting, wheel guards and tapering stern, may be seen on the highways of Nebraska, where it was placed in service by the Columbian Steel Tank Co., Kansas City, Mo. It's 71 in. high when loaded*

# New Truck Sales by Makes

Registration Figures Show May Made  
Gain Over April. Total Gain for Five  
Months 130%. Production Ahead 142%

THE forward movement of the truck industry continued in May when new truck registrations reached a total of 39,831 units. This was just about a thousand more units than were registered in April, but it was 90 per cent above the registrations in May of last year.

Total registrations for the first five months of this year were 159,976, a gain of 130 per cent over the same period of last year.

The May results give this department a black-eye (but boy, it's welcome!) for being so conservative as to say in last month's issue that May sales would be slightly under April's. The statistician's erratic estimate was 37,000.

Although the department will welcome another black-eye, both the statistician's estimate and scattered reports from the field compel the prediction that June will show a fall-off from May.

THE outstanding performance in May was turned in by the Ford organization. For the first time in

### Truck Production

	1934	1933	% Gain
Jan.	45,213	19,730	129
Feb.	45,511	15,629	191
Mar.	58,433	18,248	220
Apr.	68,626	27,431	150
May	61,533	34,223	80
5 mos.	279,316	115,261	142

moons, as the girls say, Ford went ahead of Chevrolet in total truck registrations—14,390 against 14,148. In this case the department's observations last month have been borne out. It was pointed out that while Chevrolet showed signs of slipping, Ford was forging ahead steadily. This condition held true in May when Ford sold about 1200 more units than in April, while Chevrolet dropped 900.

For the five-month period, however, Chevrolet still has a healthy lead, 63,945 compared with Ford's 49,298, and Ford will have to press down on

the accelerator for the rest of the year to step out in the lead when the totals for the year are hung up.

DODGE continued its spectacular performance with a slight increase in May over April and huge increase over May of last year. From now on the percentage gains may be less spectacular because it was about this time last year that Dodge began strutting its stuff and its climb toward third place.

International Harvester is bettering last year's marks and for the five-month period is 65 per cent ahead.

IF you enjoy a fight for position in the truck league, keep your eyes on the Reo and Diamond T registrations. Diamond T is holding sixth place on the basis of the five-month totals, but the faster rate at which Reo has been coming along is a good reason for suspecting that Reo may grab sixth place in a couple more months. Reo has been adding to its dealer organization, has put its house in order and is out gunning.

## New Truck Registrations by Makes by Months

	Autocar	Brockway	Chevrolet	Diamond T	Dodge	Federal	Ford	G. M. C.	International	Mack	Reo	Sterling	Stewart	Studebaker	White-Indiana	Miscellaneous	Total
January.....1934	79	91	8,917	406	2,581	120	6,650	555	2,284	161	289	9	61	98	284	318	22,903
January.....1933	47	39	4,884	205	360	52	3,734	344	983	79	137	12	29	134	287	383	11,709
February.....1934	58	81	10,718	420	2,723	121	6,459	453	2,150	144	339	14	60	109	357	270	24,476
February.....1933	41	42	4,645	174	348	58	2,185	271	1,126	62	151	8	31	152	180	233	9,707
March.....1934	64	117	15,112	501	4,154	170	8,642	717	2,841	145	461	10	67	126	452	315	33,894
March.....1933	45	51	4,749	202	489	54	2,037	318	1,201	55	132	5	32	101	174	289	9,934
April.....1934	88	104	15,050	534	4,367	178	13,167	839	2,729	206	527	4	90	123	558	318	38,882
April.....1933	76	97	7,299	362	870	103	4,556	644	2,021	137	216	12	40	180	201	487	17,301
May.....1934	146	117	14,148	508	4,441	186	14,390	1,031	2,849	212	578	10	103	193	544	375	39,831
May.....1933	106	88	8,649	375	1,332	138	5,665	647	2,463	152	290	7	70	205	218	520	20,925
5 Months.....1934	435	510	63,945	2,369	18,266	775	49,298	3,595	12,865	868	2,194	47	381	649	2,195	1,596	159,976
5 Months.....1933	315	317	30,226	1,318	3,399	405	18,177	2,224	7,794	485	926	44	202	772	1,060	1,912	69,576
5 Months.....% Gain	37	61	112	80	437	91	166	62	65	79	137	7	89	-16	107	-16	130

-- = decrease.

JULY, 1934



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Briefed

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- 11 Your driver says: "THEY STOP!" Your jobber says: "THEY LAST!" A Brake Headquarters Engineer says: "GREY-ROCK makes the linings that ARE RIGHT for your fleet!" So what's your answer? See page 7. Check coupon for COMPLETE INFORMATION.
- 12 INTERNATIONAL HARVESTER CO. of AMERICA, Inc., needs MORE GOOD DEALERS to sell the NEW ½-ton, 6-cylinder Truck—Model C-1. See page 8. Check coupon for information as to TERRITORY, TRUCKS and SERVICE.
- 13 STEWART Announces a NEW LOWER PRICED 2-ton Truck—\$895 chassis, f.o.b. Buffalo. STEWART Quality. STEWART Features. Honestly built . . . Honestly rated . . . Honestly priced. See page 40. Check coupon for details.
- 14 Without reconditioning or replacing any parts except the CONNECTING RODS, oil consumption was cut to ONE-TENTH, in the car illustrated on Federal-Mogul Corp., page 54.

- 15 CHECK THE RODS when you open up a motor to correct oil pumping. Check coupon for COMPLETE INFORMATION.
- 16 ESSENTIAL FEATURES of New Series of TIMKEN TUBULAR TRAILER AXLES are given in detail on The Timken-Detroit Axle Co., page 55. No other Tubular Trailer Axles possess ALL these features. Check coupon for further information.
- 17 You can greatly decrease gross weight for a given truck capacity—making a real saving in cost. Or you can increase PROFITABLE PAY-LOAD within your limiting gross weight—cutting costs by reducing trips. ALCOA ALUMINUM Truck Bodies make this possible. See page 56. Check coupon for FREE BOOK: "Alcoa Aluminum for Truck Bodies."
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# TRUCK SPECIFICATIONS TABLE

The Commercial Car Journal's Truck Specifications Table is brought up to date in each issue from data supplied monthly by truck manufacturers

## KEY TO ABBREVIATIONS AND REFERENCE MARKS

### GENERAL

**Chassis Price**—Chassis price quoted applies to the standard wheelbase and specifications listed. All prices are F.O.B. factory.

\*\*\*—List price not yet established. Ready next issue.

**Tonnage Rating**—Where a spread of ratings is given the maximum ratings are for ideal operating conditions and the minimum for extremely difficult conditions; the ranges between are for varying operating conditions.

**Gross Vehicle Weight**—Is chassis weight, plus body and cab, plus payload. Gross vehicle weight given for a model is based on maximum recommended tire size and not on tires listed as standard equipment.

**Chassis Weight Stripped**—Includes gas, oil and water and all things included in chassis price. Does not include the weight of cab.

**Maximum Brake H. P. at Given R.P.M.**—Is actual dynamometer reading without accessories.

**Tractors**—Unless given the designation N (meaning not available as tractor), all standard models may be assumed to be available as tractor.

(A) All Torque and Brake Horsepower values listed are based on engine outputs with all Standard Equipment Accessories running and are the same values obtaining with the truck on the road in actual operation.

(N) Not available as tractor.

(T) This designation accompanying a model number indicates vehicle is specifically designed for tractor use only. c. o. e.—Cab-over-engine design.

(3) Corbitt—Larger engines and corresponding auxiliary units provided on all models at extra cost.

(4) Day Elder—Model 75-1½ ton—same specifications except price—\$945, and larger tire size—B6.00/20 front and DB6.00/20 rear.

(5) Dodge—F-61 available as special tractor truck with 146-inch wheelbase with model designation of F-60, at \$2645. K-61 available as special tractor truck with 146-inch wheelbase with model designation of K-60, at \*\*\*.

(6) Dodge—Model H20, ¼-1 ton, gross vehicle weight 6,000 lb., price \$502, has same specifications as H30 except tires which are 7.50/17 and lighter rear springs.

(6) General Motors—Models T-18 to T-61 inclusive are also available for export only as coach chassis. Double reduction axles optional at extra cost in Models T-43, T-43F, T-51, T-73H and T-74. Worm type axles optional at price deduction in Models T-61, T-75T, T-75, T-75H and T-83. Chassis prices and weights on all cab-over-engine models include the cab. A complete line of super-heavy duty models designated T-85 series (4-wheel) and T-9 series (6-wheel) custom-built to exactly meet customer's requirements are available with a range of axles, wheelbases, engines, transmissions, etc. and prices will be quoted upon application.

Gramm—Larger engines and corresponding auxiliary units provided on all models at extra cost when type of service demands. Wheelbases and body mounting dimensions may change to suit special requirements. Double reduction axles available on all models except AX and BX.

Gross weight indicated for each model in the table is the straight rating. Series CXH is supplied with Hercules JXB engine in Model CXHB and Hercules JXC in Model CXHC.

(7) Grass Premier—Eight cylinder engines available on following models: 835 with Lye. GU at \$1515 list; 865 with Lye. HF at \$4230; 875 with Lye. AE at \$5400.

(8) International Harvester—A-1, ¼ ton, same as A-2 except less spring leaves and smaller tires.

(9) Le Moon—Model 600 available with Lye. AEC at same cost. Models 701 and 801 available with Waukesha GSRL at same cost.

(10) Sterling—Rocker arm used in place of springs.

(\*) Sterling—These models also available equipped with Cummins Model H Diesel engine.

†Reo—Model 1D is the longer wheelbase edition of Model 1B. The frame dimension is 7x2¼x4. It is furnished at extra cost.

††Reo—2J, 2K same as 2H except 166 in. wheelbase and price of \$1695

††Reo—3J same as 3H except wheelbase of 170 in. and price of \$2085; 3K same as 3H except 185 in. wheelbase and price of \$2155. 3M same as 3H except 205 in. wheelbase.

(11) Studebaker—S-2 in 141 in. and 165 in. wheelbases has 6½ in. frame depth.

(12) White—Each model shown is furnished with different specifications for different tonnage ratings.

•—Factory governed speed 2400 r.p.m.

(12a) White—Special prices for each installation.

(13) Marmon-Herrington—Available with Hercules Diesel engine. Price on application.

(14) Ford—Rear axle ratios 5.14 and 6.6 optional on 1½-ton trucks.

(15) Mack—Chassis price and weight include cab.

(16) Biederman—Will furnish Continental, Hercules, Waukesha and Lycoming engines at the buyer's option.

(17) Moreland—All Moreland models available with Waukesha engines and as six-wheelers with dead axle.

### MAKES—ALL

AB—American Bosch.

A La F—American La France.

AL—Auto Lite.

B—Bendix.

BB—Borg & Beck.

BL—Brown-Lipe.

BO—Bendix front, Own rear.

Blo—Blood.

Bu or Bud—Buda.

BW—Borg Warner.

BW—Bendix front, Westinghouse rear.

C or Col—Columbia.

Car—Carter.

Ch—Chicago.

CI—Ignition by compression.

Cl or Cla—Clark.

Cle—Cleveland.

Co—Covert (transmission).

Co—Covert (clutch).

Con—Continental.

Cot—Cotta Gear.

Cum—Cummins-Diesel.

Det—Detroit Lubricator.

DG—Detroit Gear and Machine.

DR—Delco Remy.

Eat—Eaton.

El—Eisemann.

En—Governor built in engine.

EV—Electro-Vac (gov.) Pierce.

Fe—Fedders.

Fu—Fuller.

Ge—Gemmer.

GO—G. & O.

Ha—Handy (governor).

Ha—Hannum (steering gear).

HaS—American Car & Fdry.

He—Hercules.

Hr—Harrison.

HS—Merchant & Evans (clutch).

HS—American Car & Fdry. (governor).

Jac—Saginaw.

Jo—Jones.

KP—Handy.

L—Lockheed.

Li—Lipe, W. C.

LN—Leece Neville.

Lo—Long.

LO—Lockheed front. Own rear.

LW—Lockheed front, Wisconsin rear.

Lyc—Lycoming.

Mc—McCord.

Ma—Marvel.

ME—Merchant & Evans.

MM—Mechanics Mach.

Mo—Modine (radiator).

Mo—Monarch (governor).

My—Mallory.

NE—North East.

No—Not supplied.

ns—No Standard.

O or Ow—Own.

Op or Opt—Optional.

Pe—Pierce (governor).

Pe—Perfex (radiator).

PS—Peters & Sneed.

RB—Robt. Bosch.

Ro—Rockford.

Ros—Ross.

Sc—Scintilla.

Sch—Wheeler-Schebler.

Sh—Shuler.

SPB—Spicer and Blood.

Sp—Spicer.

St or St—Sterling.

Str—Stromberg.

Til—Tillotson.

T or Tim—Timken.

TWH—Timken Wisconsin Herrington.

WG—Warner Gear.

Wa—Waukesha (governor).

Wau—Waukesha.

W or Wis—Wisconsin.

Ws—Westinghouse.

Yo—Young.

Zen—Zenith.

### BRAKES—SERVICE

#### Location

2—Two Wheels, rear only.

2/4—Two-wheel brakes effective on all four wheels through driveshaft.

4/6—Brakes on four rear wheels effective on all four wheels through driveshaft.

T/4—Brake on transmission effective on all four wheels through driveshaft.

4—Four Wheels, front and rear.

4r—Four Wheels, rear only.

6—Six Wheels, front and rear.

J—Jackshaft.

P—Propeller shaft.

#### Type

I—Internal.

X—External.

#### Operation

A—Air.

D—Hydraulic and mechanical.

H—Hydraulic.

M—Mechanical.

V—Vacuum.

### BRAKES—HAND

#### Location

C—Center of double propeller shaft.

2—Rear wheels.

4—Four wheels.

R—Worm or bevel gearshaft.

T—Transmission.

F—Driveshaft.

#### Type

D—Tru-Stop disk.

I—Internal.

X—External.

### BRAKE DRUMS

#### Material

A—Cast alloy iron.

A—American Car Fdry.

C—Centrifuge.

D—Dayton.

E—Ermalite.

G—Gunite.

H—Hunt Spiller.

c—Cast iron.

P—Pressed steel.

P—Pressed steel.

•—Cast steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

### CLUTCH

#### Type

D—Multiple disk.

dp—Double plate.

O—Plate in oil.

P—Single plate.

### ENGINE

#### Valve Arrangement

F—Inlet valve in head; exhaust valve at side.

H—In head.

L—"L" head, valves at side.

T—Inlet and exhaust on opposite sides.

#### Camshaft Drive

C—Chain.

G—Gear.

#### Piston Material

A—Aluminum alloy.

B—Semi-steel.

C—Cast iron.

N—Nickel iron.

S—Aluminum alloy with strut.

#### Main Bearings

r—Rear main bearing.

### Oiling System

CC—Pressure to main; connecting rod and camshaft bearings.

FP—Pressure to main, connecting rod camshaft bearings and piston pins.

PC—Pressure to mains and connecting rod bearings.

PG—Pump, gravity and splash.

PS—Pressure with splash.

### FRAME

#### Type

I—"I" Beam.

C—Channel.

T—Channel tapered front and rear.

L—Channel reinforced with liner.

B—Channel reinforced with both liner and ashplate.

P—Channel reinforced with plate.

TL—Channel tapered front and rear reinforced with liner.

D—Drop Center

Tl—Tapered front

X—X-Braced

### FUEL SYSTEM

#### Fuel Feed

E—Electric pump.

G—Gravity.

M—Mechanical pump.

P—Pressure.

V—Vacuum.

B—Bosch

C—Cummins

### REAR AXLE

#### Final Drive and Type

B—Bevel.

C—Chain.

D—Dead.

F—Full-floating.

2—Double Reduction.

S—Spiral bevel.

W—Worm.

W/2—Worm or Double Reduction

Optional

1/2—Semi-floating.

3/4—Three-quarter floating.

#### Drive and Torque

A—Radius Rods and Torque Arm.

H—Hotchkiss. (springs)

R—Radius Rods

T—Torque Arm.

U—Torque Tube.

### SPRINGS

#### Auxiliary Type

1/2—Semi-elliptic above or below main springs.

3/4—Quarter elliptic.

C—Coil spring.

N—No.

O—Optional.

### TIRES

B—Balloons.

DB—Dual Balloons.

P—High Pressure Pneumatics.

DP—Dual High Pressure Pneumatics.

S—Solids.

DS—Dual Solids.

—Pneumatics at extra cost.

### TRANSMISSION

#### Location

A—Amdships.

U—Unit with jackshaft.

J—Unit with engine.

#### Auxiliary Location

No—Not furnished.

O2—2 speed axle unit optional at extra cost.

Op—Optional at extra cost.

A—Amdships.



Line Number	MAKE AND MODEL	GENERAL (See Keynote)				TIRE SIZE		MAJOR UNITS										FRAME	
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	Front	Rear	ENGINE		TRANSMISSION		REAR AXLE				Type	
										Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Make and Model	Gear and Type	Drive and Torque	GEAR RATIOS		Side Rail Dimensions
1	A.C.F.	160	6950	186	222	26000	10170	B9.75/22	B9.75/22	Has 160	6-4 1/2 x 5 1/2	BL 1714	U4 Op	Tim 76730	2F	R 7.46 52.7	8x3x4	P	
2	Armiedier	175A	8300	186	222	26000	10750	B10.50/22	B10.50/22	Has 175	6-5 1/2 x 5 1/2	BL 1714	U4 Op	Tim 76730	2F	R 7.46 52.7	8x3x4	P	
3	Armiedier	11H	1295	156	195	11500	4850	B6.50/20	DB6.50/20	Con 16C	6-3 1/2 x 4 1/2	BL 35	U4 No	Tim	BF	H 5.83 31.2	6x3x4	P	
4	Armiedier	21Ha	2185	160	207	15300	5450	B8.25/20	DB8.25/20	Her WXC	6-4 1/2 x 4 1/2	Fu 5-A-38	U5 No	Tim	BF	H 6.06 38.5	6x3x4	P	
5	Armiedier	31Ha	2695	166	213	19500	5750	B9.00/20	DB9.00/20	Her WXC	6-4 1/2 x 4 1/2	Fu 5-A-38	U5 No	Tim	BF	H 6.02 39.2	7x3x4	P	
6	Armiedier	41Ha	3050	166	227	23000	6000	B9.75/20	DB9.75/20	Her WXC	6-4 1/2 x 4 1/2	Fu 5-A-38	U5 No	Tim	BF	H 6.83 43.8	7x3x4	P	
7	Armiedier	61Ha	3725	166	227	24000	7400	B9.75/20	DB9.75/20	Her WXC2	6-4 1/2 x 5 1/2	Fu 5-A-38	U5 No	Own	2F	R 7.07 49.7	8 1/2 x 3 1/2	P	
8	Armiedier	71Ha	3895	166	227	25000	7820	B10.50/24	DB10.50/24	Her YXC	6-4 1/2 x 5 1/2	Fu 5-A-53	U5 No	Wls	2F	R 7.07 49.8	8 1/2 x 3 1/2	P	
9	Armiedier	(T) TRD	4150	148	174	35000	7100	B9.00/20	DB9.00/20	Her YXC	6-4 1/2 x 5 1/2	Fu 5-A-53	U5 No	Own	2F	R 7.8 56.8	7x3x4	P	
10	Armiedier	(T) TRD	4350	148	174	39000	7226	B9.75/20	DB9.75/20	Her YXC3	6-4 1/2 x 5 1/2	Fu 5-A-53	U5 No	Own	2F	R 7.8 56.8	7x3x4	P	
11	Armiedier	(T) TRD	4595	148	174	45000	7326	B9.75/20	DB9.75/20	Her YXC3	6-4 1/2 x 5 1/2	Fu 5-A-53	U5 No	Wls	2F	R 7.8 56.8	7x3x4	P	
12	Autocar	RG	3000	150	192	26000	6100	P34x7	DP34x7	Own R	6-3 1/2 x 4 1/2	Own T	U4 No	Own D	2F	H 6.21 39.3	8x3x4	T	
13	Autocar	D	3500	150	192	26000	6140	P34x7	DP34x7	Own SD	6-4 1/2 x 4 1/2	Own T	U4 No	Own D	2F	H 6.21 39.3	8x3x4	T	
14	Autocar	DF	3950	150	192	26000	7010	B9.00/20	DB9.00/20	Own SD	6-4 1/2 x 4 1/2	Own T	U4 No	Own TE	2F	H 6.43 40.7	8x3x4	T	
15	Autocar	DE	4150	150	174	26000	7400	B9.75/20	DB9.75/20	Own SD	6-4 1/2 x 4 1/2	Own T	U4 No	Own N	2F	H 6.43 40.7	8x3x4	T	
16	Autocar	N	4650	191	227	26000	8275	B9.75/20	DB9.75/20	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG	2F	H 7.20 42.1	9x3x4	T	
17	Autocar	NF	4750	151	227	26000	8370	B9.75/22	DB9.75/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own TF	2F	H 7.20 42.1	9x3x4	T	
18	Autocar	S	5500	168	168	26000	9675	B9.75/22	DB9.75/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 A 3	Own CG	2F	H 8.52 54.0	10x3x4	T	
19	Autocar	C	6650	158	176	26000	11784	B10.50/24	DB10.50/24	Own SCM	6-4 1/2 x 4 1/2	BL 734	U4 A 3	Wls 78720	2F	H 9.92 121.1	10 1/2 x 3 1/2	T	
20	Autocar	NFS	10000	188	208	26000	10000	B10.50/20	DB10.50/20	Own T	6-4 1/2 x 4 1/2	Own T	U4 No	Own TE	2F	H 7.20 45.6	9x3x4	T	
21	Autocar	T	9900	192	242	26000	9680	B10.50/22	DB10.50/22	Own SCM	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG	2F	H 7.20 45.6	9x3x4	T	
22	Autocar	UD	6300	124	228	26000	10020	B9.75/22	DB9.75/22	Own SD	6-4 1/2 x 4 1/2	BL 7351	U4 No	Own H & D	2F	H 6.21 39.3	8x3x4	T	
23	Autocar	UD	6500	127	145	26000	9740	P34x7	DP34x7	Own SD	6-4 1/2 x 4 1/2	Own T	U4 No	Own TE	2F	H 6.43 40.7	8x3x4	T	
24	Autocar	UDF	3950	127	145	26000	7655	B9.00/20	DB9.00/20	Own SCH	6-4 1/2 x 4 1/2	Own T	U4 No	Own C & N	2F	H 7.20 45.6	8x3x4	T	
25	Autocar	UN	4650	96	163	26000	8635	B9.75/20	DB9.75/20	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own TF	2F	H 7.20 42.1	9x3x4	T	
26	Autocar	UNF	4850	128	163	26000	9200	B9.75/22	DB9.75/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG & TG	2F	H 7.20 45.6	8x3x4	T	
27	Autocar	US	5300	109	109	26000	9115	B9.75/22	DB9.75/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG & TG	2F	H 7.20 45.6	8x3x4	T	
28	Autocar	UT	5900	128	163	26000	9660	B10.50/22	DB10.50/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG & TG	2F	H 7.20 45.6	8x3x4	T	
29	Autocar	UT	6300	145	163	26000	10525	B9.75/22	DB9.75/22	Own SCH	6-4 1/2 x 4 1/2	Own T	U5 No	Own CG & TG	2F	H 7.20 45.6	8x3x4	T	
30	Available	W-120	1245	Op	Op	11200	4000	B6.50/20	DB6.50/20	Wau BL	6-3 1/2 x 4 1/2	WG T9	U4 No	Tim 53200	SF	H 6.42 36.2	7 1/2 x 3 1/2	TX	
31	Available	W-170	1620	Op	Op	13400	4700	B7.50/20	DB7.50/20	Wau BL	6-3 1/2 x 4 1/2	WG T9	U4 No	Tim 54300	SF	H 6.8 43.5	10x2 1/2 x 3 1/2	TX	
32	Available	W-210	1720	Op	Op	13400	4800	B7.50/20	DB7.50/20	Wau BK	6-3 1/2 x 4 1/2	BL 234	U4 No	Tim 54300	SF	H 6.8 43.5	10x2 1/2 x 3 1/2	TX	
33	Available	W-240	1975	Op	Op	16300	5400	B8.25/20	DB8.25/20	Wau BK	6-3 1/2 x 4 1/2	BL 234	U4 No	Tim 56200	SF	H 7.4 47.4	12x2 1/2 x 3 1/2	TX	
34	Available	W-300	2750	Op	Op	20700	7000	B9.00/20	DB9.00/20	Wau 6-110	6-4 1/2 x 5 1/2	Fu 5-A-380	U5 No	Tim 58205	SF	H 7.8 54.6	12x2 1/2 x 3 1/2	TX	
35	Available	W-400	3750	Op	Op	25500	8200	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2 x 5 1/2	Fu 5-A-530	U5 No	Tim 65720H	WF	H 8.5 55.6	14x3x4	TX	
36	Biederman	10	1195	157	170	8400	3200	B6.00/20	DB6.00/20	Wau 6BL(16)	6-3 1/2 x 4 1/2	War	U4 No	Cla B373	BF	H 6.37 39.4	7x3x4	T	
37	Biederman	20	1280	157	170	11400	4100	B7.00/20	DB7.00/20	Wau 6BL(16)	6-3 1/2 x 4 1/2	War	U4 No	Cla B373	BF	H 6.37 39.4	7x3x4	T	
38	Biederman	30	1795	180	200	16000	5400	B8.25/20	DB8.25/20	Wau 6BL(16)	6-3 1/2 x 4 1/2	Cla	U5 No	Cla B613	BF	H 6.37 39.4	7 1/2 x 3 1/2	T	
39	Biederman	40	2400	180	200	20000	6450	B9.00/20	DB9.00/20	Wau 6BL(16)	6-3 1/2 x 4 1/2	Cla	U5 No	Cla B805	BF	H 6.42 46.7	7 1/2 x 3 1/2	T	
40	Biederman	50	3150	180	210	20000	6820	B9.00/20	DB9.00/20	Lyc ASE (16)	6-3 1/2 x 4 1/2	BL	U5 No	Cla B805	BF	H 6.42 46.7	7 1/2 x 3 1/2	T	
41	Biederman	60	3600	157	210	24000	7530	B9.75/20	DB9.75/20	Her WXC3(16)	6-4 1/2 x 5 1/2	BL	U5 No	Wls 1237	2F	H 8.00 48.7	8x3x4	T	
42	Biederman	70	4200	187	210	28000	8200	B10.50/20	DB10.50/20	Her WXC3(16)	6-4 1/2 x 5 1/2	BL	U5 No	Wls 1237	2F	H 8.00 48.7	8x3x4	T	
43	Biederman	80	4800	187	210	32000	8200	B10.50/20	DB10.50/20	Con 26B	6-3 1/2 x 4 1/2	Wa T9	U4 No	Tim 53200H	SF	H 6.2 36.2	7 1/2 x 2 1/2	T	
44	Biederman	90	5400	187	210	36000	8200	B10.50/20	DB10.50/20	Con 28B	6-3 1/2 x 4 1/2	Wa T9	U4 No	Tim 54300H	SF	H 6.83 37.4	7 1/2 x 2 1/2	T	
45	Biederman	100	6000	187	210	40000	8200	B10.50/20	DB10.50/20	Con 30B	6-4 1/2 x 4 1/2	BL 314	U4 Op	Tim 54300H	SF	H 5.83 38.5	7 1/2 x 3 1/2	T	
46	Biederman	110	6600	187	210	44000	8200	B10.50/20	DB10.50/20	Con 32B	6-4 1/2 x 4 1/2	BL 314	U4 Op	Tim 54300H	SF	H 5.83 38.5	7 1/2 x 3 1/2	T	
47	Biederman	120	7200	187	210	48000	8200	B10.50/20	DB10.50/20	Con 34B	6-4 1/2 x 4 1/2	Fu 5-A-38	U5 Op	Tim 56200H	SF	H 6.60 43.5	7 1/2 x 3 1/2	T	
48	Biederman	130	7800	187	210	52000	8200	B10.50/20	DB10.50/20	Con 36B	6-4 1/2 x 4 1/2	Fu 5-A-38	U5 Op	Tim 58205H	SF	H 7.4 47.4	8x3x4	T	
49	Biederman	140	8400	187	210	56000	8200	B10.50/20	DB10.50/20	Con 38B	6-4 1/2 x 4 1/2	BL 5352	U5 Op	Wls 72000	2F	H 5.78 44.8	8x3x4	T	
50	Biederman	150	9000	187	210	60000	8200	B10.50/20	DB10.50/20	Con 40B	6-4 1/2 x 4 1/2	BL 5352	U5 Op	Wls 1337BH	2F	H 5.63 43.4	8x3x4	T	
51	Biederman	160	9600	187	210	64000	8200												



Line Number	ENGINE DETAILS										FUEL SYST.	ELEC-TRICAL	FRONT AXLE	BRAKES		BODY MOUNT-ING DATA			SPRINGS											
	Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS	Oiling System Type				Governor Make	Carburetors Make	Fuel Feed	Ignition System Make	Generator, Starter Make	Clutch Type and Make	Radiator Make	Universal Make	Steering Gear Make	Service Make, Location Type, Operation	Lining Area	Drum Material	Hand Location, Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front
1	468	4.4	322	43.3	120-2200	H	C	A7-7-2-3	10%	CC	Ha	Zen	VDR	DR	P.B.L	Lo	Spl	Tim 27451	Ros	O41A	720.A	CD	172	102	33 1/2	42x3	56x4			
2	707	4.4	500	60.4	175-2200	H	H	A7-7-2-3	14%	CC	Ha	Zen	MDR	DR	dp.Lo	Lo	Spl	Tim 27451	Ros	O41A	720.A	CD	172	102	33 1/2	42x3	56x4			
3	248	5.0	150	27.3	76-2800	L	L	A7-7-2-3	10%	FP	Mo	No	Str	MAL	AL	D.B.B	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
4	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
5	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
6	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
7	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
8	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
9	339	4.7	225	38.4	73-2200	L	L	A7-7-2-3	13%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
10	428	5.0	280	48.6	101-2400	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
11	478	4.4	318	51.2	115-2200	L	L	A7-7-2-3	15%	PC	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
12	529	4.4	355	51.2	115-2200	L	L	A7-7-2-3	15%	PC	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
13	314	5.2	213	33.7	75-2400	L	L	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
14	358	5.2	240	38.4	84-2500	L	L	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
15	358	5.2	240	38.4	84-2500	L	L	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
16	358	5.2	240	38.4	84-2500	L	L	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
17	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
18	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
19	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
20	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
21	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
22	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
23	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
24	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
25	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
26	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
27	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
28	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
29	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
30	404	5.1	271	43.4	94-2500	L	L	A7-7-2-3	14%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 31000	Ros	O41A	816	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
31	245	5.1	165	29.4	73-3000	L	L	A7-7-2-3	10%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
32	245	5.1	165	29.4	73-3000	L	L	A7-7-2-3	10%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
33	282	5.1	188	33.8	85-3200	L	L	A7-7-2-3	10%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
34	282	5.1	188	33.8	85-3200	L	L	A7-7-2-3	10%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
35	358	5.1	254	38.4	110-2800	F	G	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
36	462	5.0	324	45.9	125-2600	L	L	A7-7-2-3	12%	FP	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
37	215	5.0	142	27.3	72-3000	L	L	A7-7-2-3	10%	CC	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
38	245	5.2	162	29.4	75-2800	L	L	A7-7-2-3	10%	CC	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/2	40x2 1/2	50x3		
39	245	5.2	162	29.4	75-2800	L	L	A7-7-2-3	10%	CC	Mo	No	Str	MAL	AL	D.Fu	Yo	Spl	Tim 27450	Ros	O41A	599	TX	129 1/2	Opt	31 1/				

Line Number	MAKE AND MODEL	GENERAL (See Keynote)				TIRE SIZE		MAJOR UNITS										FRAME		
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	ENGINE		TRANSMISSION		REAR AXLE				Gear and Type	Drive and Torque	Gear Ratios	Side Rail Dimensions	Type
								Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Make and Model	Location and Forward Speeds	Make and Model	Location and Forward Speeds					
1	Dodge Bros. K35 (Concluded)	1 1/4-4	870	140	169	12500	3580	B6.50/20	DB6.50/20	Own	6-3 1/2x4 1/2	Own	U5	Op	Own	SF	H6.33	44.7	7 1/2x2 1/2	C
2	F40	2-4	1995	150	190	16000	5173	B6.50/20	DB6.50/20	Own	6-3 1/2x5	Own	U4	Op	Own	SF	H6.33	44.7	8 1/2x2 1/2	C
3	K50	2-5	1995	150	190	16000	5344	P32x6	DP32x6	Own	6-3 1/2x5	Own	U4	Op	Own	SF	H6.37	43.7	9 1/2x3 1/2	C
4	(5) F-61	3 1/2-5 1/2	2575	170	195	20000	5789	P32x6	DP32x6	Own	6-3 1/2x5	Own	U4	Op	Own	SF	H7.12	48.8	10 1/2x3 1/2	C
5	(5) K-71	3 1/2-5 1/2	2575	170	195	20000	5789	P32x6	DP32x6	Own	6-3 1/2x5	Own	U4	Op	Own	SF	H7.12	48.8	10 1/2x3 1/2	C
6	G-80	4-8	5250	146	220	25000	7640	B9.75/20	DB9.75/20	Own	6-3 1/2x5	Own	U5	Op	Own	SF	H7.12	48.8	10 1/2x3 1/2	C
7	Duplex	8	*** 166	Op	18000	6250	B8.25/20	DB8.25/20	Bud K325	6-4 1/2x4 1/2	BL 2352	U5	Op	Tim 65200	WF	H Opt	Opt	7 1/2x3 1/2	C	
8	SAC	8	*** 172	Op	22000	7135	B9.75/20	DB9.75/20	Bud K428	6-4 1/2x4 1/2	BL 3353	U5	Op	Tim 75733	WF	R Opt	Opt	7 1/2x3 1/2	C	
9	Lo.	8	*** 172	Op	27500	7525	B10.50/20	DB10.50/20	Bud L525	6-4 1/2x5 1/2	BL 5351	U5	Op	Tim 76733	WF	R Opt	Opt	8 1/2x3 1/2	C	
10	Esco	23 1/2-2 1/2	2860	165	205	15000	5900	B7.50/20	DB7.50/20	Con E603	6-4 1/2x4 1/2	CI 105R	U5	Op	Cla B642	BF	H 5.75	40.7	6 1/2x3 1/2	C
11	Pageol	10 1/2-2 1/2	102	148	172	11200	4000	B6.00/20	DB6.00/20	Wau ZK	6-3 1/2x4 1/2	WG T9	U4	Op	Tim 53200H	BF	H 5.66	36.2	6 1/2x3 1/2	C
12	106BK	1 1/2-2 1/2	1700	161	195	11200	5000	B6.50/20	DB6.50/20	Wau 6BK	6-3 1/2x4 1/2	WG T9	U4	Op	Tim 53200H	BF	H 5.66	36.2	6 1/2x3 1/2	C
13	106RA	1 1/2-2 1/2	1825	161	195	12700	5100	B6.50/20	DB6.50/20	Wau 6BK	6-3 1/2x4 1/2	WG T9	U4	Op	Tim 54200H	BF	H 5.83	37.3	6 1/2x3 1/2	C
14	135HP	2-3	2250	161	195	13400	5800	B7.50/20	DB7.50/20	Wau 6-90	6-3 1/2x4 1/2	BL 234	U4	Op	Tim 54200H	BF	H 5.83	37.3	6 1/2x3 1/2	C
15	135RA	2-3	2400	161	195	15000	6000	B7.50/20	DB7.50/20	Wau 6-90	6-3 1/2x4 1/2	BL 234	U4	Op	Tim 56200H	BF	H 7.4	47.4	6 1/2x3 1/2	C
16	135SC	2-3	2150	161	210	14700	5100	B7.50/20	DB7.50/20	Wau 6-90	6-3 1/2x4 1/2	BL 234	U4	Op	Tim 54200H	BF	H 5.83	37.3	6 1/2x3 1/2	C
17	135BK	2-3	2050	161	195	13400	5700	B7.50/20	DB7.50/20	Wau 6BK	6-3 1/2x4 1/2	WG T9	U4	Op	Tim 54200H	BF	H 5.83	37.3	6 1/2x3 1/2	C
18	250HP	2 1/2-4	3000	178	196	16300	7200	B8.25/20	DB8.25/20	Wau 6-110	6-4 1/2x4 1/2	BL 524	U4	Op	Tim 56200H	BF	H 7.4	53.9	8 1/2x3 1/2	T
19	250MK	2 1/2-4	3700	182	200	16300	6750	B8.25/20	DB8.25/20	Wau 6MS	6-4 1/2x4 1/2	BL 524	U4	Op	Tim 56200H	BF	H 7.4	53.9	8 1/2x3 1/2	T
20	250RA	2 1/2-4	2750	178	196	16300	6900	B8.25/20	DB8.25/20	Wau 6MK	6-4 1/2x4 1/2	WG T9	U4	Op	Tim 56200H	BF	H 7.4	53.9	8 1/2x3 1/2	T
21	250SC	2 1/2-4	3150	178	196	19500	7400	B8.25/20	DB8.25/20	Wau 6-110	6-4 1/2x4 1/2	BL 524	U4	Op	Tim 58200H	BF	H 7.8	56.8	8 1/2x3 1/2	T
22	300HP	3-5	2925	178	230	17500	6900	B8.25/20	DB8.25/20	Wau 6-110	6-4 1/2x4 1/2	BL 524	U4	Op	Tim 56200H	BF	H 7.4	53.9	8 1/2x3 1/2	T
23	300RA	3-5	3775	182	200	25300	8400	B9.00/20	DB9.00/20	Wau 6-110	6-4 1/2x4 1/2	BL 524	U4	Op	Tim 58200H	BF	H 7.8	56.8	8 1/2x3 1/2	T
24	370HP	3-5	5000	182	200	25300	9500	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2x5 1/2	BL 734	U4	Op	Tim 65725H	WF	R 5.7	120.7	7 1/2x3 1/2	C
25	370RA	3-5	4850	182	200	25300	9750	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2x5 1/2	BL 734	U4	Op	Tim 65725H	WF	R 5.7	120.7	7 1/2x3 1/2	C
26	370RA	3-5	5250	182	200	31000	10200	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2x5 1/2	BL 734	U4	Op	Tim 66720DH	WF	R 5.5	116.7	7 1/2x3 1/2	C
27	470HP	6-7	5500	182	200	33500	10350	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2x5 1/2	BL 734	U4	Op	Tim 66720DH	WF	R 5.5	116.7	7 1/2x3 1/2	C
28	470RA	6-7	5500	182	200	33500	10350	B9.75/20	DB9.75/20	Wau 6-125	6-4 1/2x5 1/2	BL 734	U4	Op	Tim 66720DH	WF	R 5.5	116.7	7 1/2x3 1/2	C
29	685RB	8-10	7100	174	174	42000	12750	B10.50/24	DB10.50/24	Wau 6RB	6-5x5 1/2	BL 734	U4	Op	Tim 68720W	WF	R 6.54	144.8	8 1/2x4 1/2	C
30	Federal	DM	9750	120	120	8000	3050	B6.00/20	P32x6	Con W10	4-3 1/2x4 1/2	WG T9	U4	Op	Cla B374	SF	H 5.67	36.2	6 1/2x3 1/2	C
31	15 1/2	1 1/2	745	137	174	10000	3500	B6.00/20	P32x6	Her JXA	6-3 1/2x4 1/2	WG T9	U4	Op	Cla B374	SF	H 6.38	40.8	8 1/2x2 1/2	C
32	15 1/2	1 1/2	845	137	174	10000	3500	B6.00/20	P32x6	Her JXA	6-3 1/2x4 1/2	WG T9	U4	Op	Cla B374	SF	H 6.38	40.8	8 1/2x2 1/2	C
33	18X	2	1065	137	187	12000	3900	B6.50/20	DB6.50/20	Her JXB	6-3 1/2x4 1/2	WG T9	U4	Op	Cla B640	SF	H 6.80	43.5	8 1/2x2 1/2	C
34	25 1/2	2 1/2	1325	137	201	14000	4500	B7.00/20	DB7.00/20	Her JXC	6-3 1/2x4 1/2	Cla R115	U5	Op	Cla B640	SF	H 6.38	45.2	8 1/2x2 1/2	C
35	T3W	2 1/2	1595	148	185	14000	5110	P32x6	P36x8	Wau V	4-4x5	Own 7754	A4	Op	Tim 64603H	WF	R 7.25	36.3	6 1/2x3 1/2	C
36	T3WFA	2 1/2-3	1795	148	185	16000	5400	P32x6	DP32x6	Wau V	4-4x5	Own 7754	A4	Op	Tim 65001H	WF	R 7.85	43.8	6 1/2x3 1/2	C
37	30	3-3	2095	175	237	16000	6050	B8.25/20	DB8.25/20	Wau 6MS	6-3 1/2x4 1/2	Cla R114	U5	Op	Cla B642	SF	H 6.43	45.5	10 1/2x3 1/2	T
38	40R	3-4	2490	175	237	19000	6550	B9.00/20	DB9.00/20	Wau 6MK	6-4 1/2x4 1/2	Cla R908	U5	Op	Tim 58200H	SF	H 6.89	55.5	10 1/2x3 1/2	T
39	40DR	3-4	2615	175	237	19000	6550	B9.00/20	DB9.00/20	Wau 6MK	6-4 1/2x4 1/2	Cla R908	U5	Op	Tim 75200H	2F	H 7.0	56.9	10 1/2x3 1/2	T
40	T10B	3-4	2550	165	230	19000	6550	P34x7	DP34x7	Con 18R	6-4 1/2x4 1/2	Own 7784	A4	Op	Tim 58200H	SF	R 6.83	44.5	7 1/2x3 1/2	C
41	T10DR-T10W	3-4	2655	165	230	19000	6550	P34x7	DP34x7	Con 18R	6-4 1/2x4 1/2	Own 7784	A4	Op	Tim 58200H	SF	R 6.83	44.5	7 1/2x3 1/2	C
42	U6-U6DR	4 1/2-5	3860	165	230	22000	7420	P36x8	DP36x8	Con 20R	6-4 1/2x4 1/2	Cla B 710	A5	Op	Tim 65796H	W/F	R 7.75	50.4	7 1/2x3 1/2	C
43	50	5-5 1/2	3775	175	237	22000	7150	B9.00/20	DB9.00/20	Wau 6MZ	6-4 1/2x4 1/2	Cla R908	A5	Op	Tim 75733H	2F	R 7.37	59.9	10 1/2x3 1/2	T
44	C5W	6	4710	195	249	26000	9550	B9.75/20	DB9.75/20	Wau 6SRK	6-4 1/2x5 1/2	Cla B 710	A5	Op	Tim 76736H	W/F	R 7.89	51.7	7 1/2x3 1/2	C
45	C5W	6	5120	195	249	26000	9550	B9.75/20	DB9.75/20	Wau 6SRK	6-4 1/2x5 1/2	Cla B 710	A5	Op	Tim 76736H	W/F	R 7.89	51.7	7 1/2x3 1/2	C
46	X8DR-X8R	7 1/2	4335	162	186	30000	8750	S36x8	S40x1	Con B7	4-5x6	Cla B 710	A5	Op	Tim 68700DH	W/F	R 11.77	69.0	8 1/2x3 1/2	C



JULY, 1934



Line Number	MAKE AND MODEL	GENERAL (See Keynote)					TIRE SIZE		MAJOR UNITS										FRAME				
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	Front	Rear	ENGINE		TRANSMISSION		REAR AXLE				Side Rail Dimensions	Type				
										Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Aux. Location and Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratios In High In Low						
1	Hug (Concluded)	87K	31	4360	128	128	23000	8156	B9.75/20	DB9.75/20	Bud K428	6-4 1/2 x 4 1/2	Fu MHOG	A 8	No	Wis 1237Q	2F	H 8.95	79.0	7x3 1/2 x 4 1/2	T	1428	4.8
2	433	31	3510	146	201	23000	7800	B9.75/20	DB9.75/20	Bud K428	6-4 1/2 x 4 1/2	Fu 5A-530	U 5	No	Wis 1237H	2F	H 8.95	62.0	8x3 1/2 x 4 1/2	T	1428	4.8	
3	87Q	5	4985	144	144	28200	8300	B10.50/20	DB10.50/20	Bud K428	6-4 1/2 x 4 1/2	Fu 5A-530	A 5	A 2	Wis 1737K	2F	H 9.16	99.0	8x4 1/2 x 4 1/2	T	1428	4.8	
4	431	5	4325	146	201	28105	8905	B9.75/20	DB9.75/20	Bud L525	6-4 1/2 x 5 1/2	Fu 5A-530	U 5	No	Wis 1737KW	2F	H 9.16	64.0	8x3 1/2 x 4 1/2	T	1428	4.8	
5	97L	7 1/2	5925	144	144	35620	10810	B10.50/20	DB10.50/20	Bud L525	6-4 1/2 x 5 1/2	Fu 5A-530	A 5	A 2	Wis 19027	2F	H 11.1	178.0	8x4 1/2 x 4 1/2	T	1428	4.8	
6	Indiann.	85	1025	141	186	10000	3950	B6.50/20	DB6.50/20	Her JXC	6-3 1/2 x 4 1/2	BL 224	U 4	No	Tim 53200H	SF	H 5.66	33.1	7 1/2 x 2 1/2 x 3 1/2	T	1428	4.8	
7	95DR	2 1/2	1275	141	186	12000	4400	P32x6	DB2.50/20	Her JXC	6-3 1/2 x 4 1/2	BL 224	U 4	No	Tim 54300H	SF	H 5.85	36.2	7 1/2 x 2 1/2 x 3 1/2	T	1428	4.8	
8	17A	3	2300	156	212	17000	6300	B8.25/20	DB8.25/20	Her WXC	6-4 1/2 x 4 1/2	BL 3341	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
9	17ADR	3	2475	156	212	18000	6350	B8.25/20	DB8.25/20	Her WXC	6-4 1/2 x 4 1/2	BL 3341	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
10	17	3	2450	170	224	18000	6700	B8.25/20	DB8.25/20	Her YXC	6-4 1/2 x 4 1/2	BL 3341	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
11	17DR	3	2675	170	224	19000	6700	B8.25/20	DB8.25/20	Her YXC	6-4 1/2 x 4 1/2	BL 3341	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
12	19DR	3 1/2	3400	170	224	22000	7800	B9.00/20	DB9.00/20	Her YXC	6-4 1/2 x 4 1/2	BL 3341	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
13	43DR	4	4300	170	224	25000	8000	B9.75/20	DB9.75/20	Her RXB	6-4 1/2 x 5 1/2	BL 524	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
14	45DR	4	4800	170	224	25000	8700	B9.75/20	DB9.75/20	Her RXC	6-4 1/2 x 5 1/2	BL 534	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
15	47DR	5-7	7500	188	234	28000	10500	B10.50/20	DB10.50/20	Con SHDle	6-4 1/2 x 6	BL 7351	A 5	No	Wis 1910W	2F	H 7.16	45.0	8x3 1/2 x 4 1/2	T	1428	4.8	
16	International	C1	445	113	125	2220	4400	B5.25/18	B5.25/18	Own HD	6-3 1/2 x 4 1/2	Own D	U 3	No	Own HDR-55	SF	H 4.18	12.5	5 1/2 x 2 1/2 x 3 1/2	T	1428	4.8	
17	M2	1 1/2	850	118	118	3215	7100	B6.50/20	B6.50/20	Wau XAH	4-3 1/2 x 4 1/2	Own H4A	U 4	No	Own 713	SF	H 6.29	19.5	6x2 1/2 x 3 1/2	T	1428	4.8	
18	(S)	1 1/2	695	136	175	3530	8000	B6.00/20	B6.00/20	Own FAB-2	6-3 1/2 x 4	Own H4A	U 4	No	Own 720	SF	H 6.17	39.5	7 1/2 x 2 1/2 x 3 1/2	T	1428	4.8	
19	B3	1 1/2	1045	145	185	4230	3000	B6.50/20	DB6.50/20	Own FAB-3	6-3 1/2 x 4	Own H4A	U 4	No	Own 720	SF	H 6.50	41.2	6x3 1/2 x 3 1/2	T	1428	4.8	
20	A2	1 1/2	1625	145	185	5706	1650	P32x6	DP32x6	Own FBB	6-3 1/2 x 4 1/2	Own H5	U 5	A 3	Own 902	SF	H 6.50	47.8	7x3 1/2 x 4 1/2	T	1428	4.8	
21	A4	2	2100	140	210	6238	19100	P34x7	DP34x7	Own FBB	6-3 1/2 x 4 1/2	Own H5	U 5	A 3	Own 1002	SF	H 6.50	47.8	7x3 1/2 x 4 1/2	T	1428	4.8	
22	A6	3	2450	140	210	6526	21600	P34x7	DP34x7	Own FBB	6-3 1/2 x 4 1/2	Own H5	U 5	A 3	Own 1002	SF	H 6.50	47.8	7x3 1/2 x 4 1/2	T	1428	4.8	
23	W2	3 1/2	3300	160	225	8250	37000	P36x8	DP36x8	Own FBB	6-4 1/2 x 5 1/2	Own H7	U 5	A 3	Own 1301	2F	H 6.38	57.3	12 1/2 x 4 1/2 x 3 1/2	T	1428	4.8	
24	A8	7 1/2	6300	160	225	11590	37000	B9.75/20	DB9.75/20	Own FEB	6-4 1/2 x 5 1/2	Own H7	U 5	A 3	Own 1301	2F	H 6.38	57.3	12 1/2 x 4 1/2 x 3 1/2	T	1428	4.8	
25	Kenworth	87	1245	146	170	11200	3900	B6.50/20	DB6.50/20	Her JXC	6-3 1/2 x 4 1/2	BL 234	U 4	A 3	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
26	88	2	1480	146	200	13400	4400	P32x6	DP32x6	Her JXC	6-3 1/2 x 4 1/2	BL 234	U 4	A 3	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
27	101B	2-2 1/2	2050	146	200	13400	4700	B7.50/20	DB7.50/20	Bud H298	6-3 1/2 x 4 1/2	BL 234	U 4	A 3	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
28	89	2 1/2	1670	146	200	15000	4600	B7.50/20	DB7.50/20	Her JXC	6-3 1/2 x 4 1/2	BL 234	U 4	A 3	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
29	90	2 1/2	1820	146	200	18200	5500	B7.50/20	DB7.50/20	Her JXC	6-3 1/2 x 4 1/2	BL 234	U 4	A 3	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
30	146B	3-4	3300	158	206	19500	5960	B9.00/20	DB9.00/20	Bud K393	6-4 1/2 x 4 1/2	BL 334	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
31	D146B	3-4	5770	158	206	19500	7500	B9.00/20	DB9.00/20	Bud C4-15	6-4 1/2 x 5 1/2	BL 5341	U 4	A 3	Tim 58206H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
32	D-146 C	3-4	6250	158	206	19500	7600	B9.00/20	DB9.00/20	Cum HA-4	4-4 1/2 x 6	BL 5341	U 4	A 3	Tim 58206H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
33	166B	3-4	3850	156	204	20700	6890	B9.00/20	DB9.00/20	Bud K393	6-4 1/2 x 4 1/2	BL 334	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
34	166A	3-4	4330	156	204	20700	6890	B9.00/20	DB9.00/20	Has 147	6-4 1/2 x 4 1/2	BL 334	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
35	18	3	1820	156	204	20700	6890	B9.00/20	DB9.00/20	Has 147	6-4 1/2 x 4 1/2	BL 334	U 4	A 3	Tim 58205H	SF	H 6.83	43.0	8x3 1/2 x 4 1/2	T	1428	4.8	
36	241	5-7	5450	169	221	27800	9000	B9.75/20	DB9.75/20	Her RXB	6-4 1/2 x 5 1/2	BL 714	U 4	A 3	Tim 76720W	2F	H 7.33	85.5	7x9 1/2 x 3 1/2	T	1428	4.8	
37	241A	5-7	6500	169	228	27800	9500	B9.75/20	DB9.75/20	Has 160	6-4 1/2 x 5 1/2	BL 714	U 4	A 3	Tim 76720W	2F	H 7.33	85.5	7x9 1/2 x 3 1/2	T	1428	4.8	
38	241B	5-7	6150	174	228	27800	9500	B9.75/20	DB9.75/20	Has GL-6	6-4 1/2 x 6	BL 714	U 4	A 3	Tim 76720W	2F	H 7.33	85.5	7x9 1/2 x 3 1/2	T	1428	4.8	
39	241C	5-7	7200	174	228	27800	10000	B9.75/20	DB9.75/20	Has 175	6-5x6	BL 714	U 4	A 3	Tim 76720W	2F	H 7.33	85.5	7x9 1/2 x 3 1/2	T	1428	4.8	
40	Kielber	80	1300	140	160	11200	3950	B7.00/20	DB7.00/20	Her JXC	6-3 1/2 x 4 1/2	BL 2241	U 4	No	Tim 53200H	SF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
41	120	2 1/2	2100	170	180	16300	5150	B8.25/20	DB8.25/20	Con E601	6-3 1/2 x 4 1/2	BL 3241	U 4	No	Tim 56200H	BF	H 6.17	33.4	7 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
42	140	3-5 1/2	2650	180	190	20700	6500	B8.25/20	DB8.25/20	Con 18R	6-4 1/2 x 4 1/2	BL 3241	U 4	No	Tim 58200H	BF	H 6.84	38.7	7 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
43	210	4	3800	190	200	22000	7600	B9.00/20	DB9.00/20	Con 21R	6-4 1/2 x 4 1/2	BL 5241	U 4	No	Tim 58200H	BF	H 7.25	42.0	7 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
44	KD4	4	5400	190	200	22000	8000	B9.00/20	DB9.00/20	Cum H Dle	4-4 1/2 x 6	BL 531	U 4	No	Tim 58200H	BF	H 7.25	42.0	7 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
45	KD6	6	6000	206	210	26000	9500	B9.75/20	DB9.75/20	Con SHDle	6-4 1/2 x 6	BL 714	U 4	A 4	Tim 65041W	2F	H 8.51	39.1	9 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
46	La Fr. Republic	C-2	1100	150	162	11000	3800	B6.00/20	DB6.00/20	Lyc S	6-3 1/2 x 4 1/2	WG T9	U 4	No	Tim 53200H	SF	H 5.83	37.7	7x3 1/2 x 3 1/2	T	1428	4.8	
47	D-2	2 1/2	1485	150	162	11000	4600	B6.50/20	DB6.50/20	Lyc SB	6-3 1/2 x 4 1/2	WG T9	U 4	No	Tim 53200H	SF	H 5.83	37.7	7x3 1/2 x 3 1/2	T	1428	4.8	
48	E-2	2 1/2	2005	162	190	17000	5375	P32x6	DP32x6	Lyc ASD	6-3 1/2 x 4 1/2	Fu Mlu-Bb	U 4	No	Tim 56200H	SF	H 7.4	47.0	7x3 1/2 x 3 1/2	T	1428	4.8	
49	F-3	3-4	2420	174	198	21000	6240	P34x7	DP34x7	Wau MK	6-4 1/2 x 4 1/2	Fu MGU14	U 4	No	Tim 58200H	SF	H 7.8	50.6	8x3 1/2 x 4 1/2	T	1428	4.8	
50	H-5	5-6	3285	179	206	26000	7840	B9.75/20	DB9.75/20	Wau MZ	6-4 1/2 x 4 1/2	Fu MRU	U 4	No	Tim 75733H	SF	H 7.97	53.0	8x3 1/2 x 4 1/2	T	1428	4.8	
51	M-3	5-6	4640	174	198	32000	8490	B10.50/20	DB10.50/20	Wau 6SR	6-4 1/2 x 5 1/2	Fu VUOG	U 5	No	Tim 76733H	2F	H 8.85	62.5	9 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
52	35-47	8	6570	174	198	35000	9700	B10.50/24	DB10.50/24	Wau 6-125	6-4 1/2 x 5 1/2	Fu MHU	U 4	No	Tim 78720W	2F	H 8.90	58.2	9 1/2 x 3 1/2 x 3 1/2	T	1428	4.8	
53	Le Moon	150	1150	150	162	11000	4600	B6.50/20	DB6.50/20	Con 20C	6-3 1/2 x 4 1/2	BL 214	U 4	No	Tim 53200H	BF	H 5.14	33.1	8x3 1/2 x 4 1/2	T	1428	4.8	
54	200	1-2	1350	160	178	13400	3600	B7.00/20	DB7.00/20														

Type

Type

Type

Type

Type

Line Number	ENGINE DETAILS										MAIN BEARINGS	Oiling System Type	Governor Make	Carburetors Make	FUEL SYST.	ELEC-TRICAL	FRONT AXLE	BRAKES		BODY MOUNT-ING DATA		SPRINGS										
	Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	Number and Diameter	Length								Steering Gear Make	SERVICE		Hand Location, Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear	Auxiliary Type					
																			Make, Location Type, Operation	Lining Area								Drum Material				
1428	4.8	280	45.9	107-2600	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	405	G	TD	94 1/2	70 1/2	34 1/2	41 1/2	48 1/2	x3
2428	4.8	280	45.9	107-2600	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	110 1/2	86 1/2	35 1/4	41 1/2	48 1/2	x3
3428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	96 1/2	66 1/2	31 1/4	41 1/2	48 1/2	x3
4428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	119	66 1/2	35 1/4	41 1/2	48 1/2	x3
5428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
6428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
7428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
8428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
9428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
10428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
11428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
12428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
13428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
14428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
15428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
16428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
17428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
18428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
19428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
20428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
21428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
22428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
23428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
24428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
25428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
26428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
27428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
28428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
29428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
30428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
31428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
32428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
33428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
34428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
35428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
36428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
37428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
38428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
39428	4.8	336	48.6	111-2200	L	L	L	B	7-3	11 1/2	FP	Pe	Zen	M	DR	DR	D	Fu	Yo	Blo	Shu 610-103	Ros	W2IM	360	G	TD	92	56	34	37 1/2	54 1/2	x2
40428	4.8	336	48.6	111-2200	L	L	L																									



Line Number	MAKE AND MODEL	GENERAL (See Keynote)					TIRE SIZE		MAJOR UNITS					FRAME			
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	Front	Rear	ENGINE		TRANSMISSION		REAR AXLE			
										Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Make and Model	Gear and Type	Drive and Torque	GEAR RATIOS In High In Low
1	Schacht (Con.) 40H	5-7	4295	156	239	25500	7600	B9.75/20	DB9.75/20	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
2	40HB	7-9	4695	156	239	29500	7750	B10.50/20	DB10.50/20	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
3	66HA	8-11	5895	154	251	35000	9820	B10.50/24	DB10.50/24	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
4	(T) TRD	10	4150	150	174	35000	7100	B9.00/20	DB9.00/20	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
5	(T) TRDA	12	4350	150	174	39000	7226	B9.75/20	DB9.75/20	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
6	(T) TRDB	15	4595	150	174	45000	7326	B9.75/20	DB9.75/20	Her YXC	6-4x4x4	Fu 5-A-53	U5 No Own	2F	R 7.07 49.7 8x4x3x	P	
7	Sterling	14-2	1135	142	162	11000	3450	B6.50/20	DB6.50/20	Con 25A	6-3x4x4	WG T9	U4 No Own	BF	H 5.66 36.2 6x2x4x	C	
8	FB40	2-3	1240	142	162	11500	3650	B7.00/20	DB7.00/20	Con 25A	6-3x4x4	WG T9	U4 No Own	BF	H 5.66 36.2 6x2x4x	C	
9	FB50	2-3	1590	142	162	14000	4150	B7.00/20	DB7.00/20	Wau TL	6-3x4x4	WG T9	U4 No Own	BF	H 5.83 37.3 6x2x4x	C	
10	FB70	2-3	2635	174	204	17000	5755	B7.50/20	DB7.50/20	Wau ML	6-4x4x4	Own UC7	U5 No Own	BF	R 7.4 52.7 10x3x4	L	
11	FB80	3-4	3065	174	204	21000	6860	B8.25/20	DB8.25/20	Wau ML	6-4x4x4	Own UC7	U5 Op Own	2F	R 7.8 55.3 10x3x4	L	
12	FB80 SPC	3-4	3010	174	204	21000	6860	B8.25/20	DB8.25/20	Wau ML	6-4x4x4	Own UC7	U5 Op Own	2F	R 7.8 55.3 10x3x4	L	
13	FC90	4	4105	174	204	22000	7480	B9.00/20	DB9.00/20	Wau 6MK	6-4x4x4	Own UC7	U5 Op Own	CD	R 8.66 61.7 10x3x4	L	
14	FD90	4	3315	174	204	22000	7480	B9.00/20	DB9.00/20	Wau MK	6-4x4x4	Own UC7	U5 Op Own	2F	R 8.0 57.0 10x3x4	L	
15	FD97S	4-5	4355	192	222	26000	8200	P36x8	DP36x8	Wau 6SRL	6-4x4x4	Own UC2	U4 Op Own	w/2F	R 7.75 51.6 12x3x4	L	
16	FC100	5-5 1/2	4185	192	222	26000	7750	P36x8	DP36x8	Wau 6MK	6-4x4x4	Own UC2	U4 Op Own	CD	R 9.3 61.2 12x3x4	L	
17	FD115	5-6	4690	192	222	32000	8750	P40x8	DP40x8	Wau 6SRL	6-4x4x4	Own UC2	U4 Op Own	w/2F	R 8.20 54.6 12x3x4	L	
18	FC107	5-6	4700	170	241	27000	8200	P36x8	DP36x8	Wau 6SRL	6-4x4x4	Own UC2	U4 Op Own	CD	R 8.20 54.6 12x3x4	L	
19	FD140	7-8	6285	192	222	35000	10050	P40x8	DP40x8	Wau 125	6-4x4x4	Own UC2	U4 Op Own	w/2F	R 9.3 66.6 15x3x4	L	
20	FC135	7-8	4800	192	222	35000	8900	P40x8	DP40x8	Wau SRL	6-4x4x4	Own UC2	U4 Op Own	CD	R 9.3 66.6 15x3x4	L	
21	FC140	8-8 1/2	5245	200	230	36000	9350	P40x8	DP40x8	Wau 6-125	6-4x4x4	Own UC2	U4 Op Own	CD	R 8.3 55.2 15x3x4	L	
22	FC145	8-8 1/2	5100	200	230	37000	10100	P40x8	DP40x8	Wau AB	6-4x4x4	Own UC8	U4 Op Own	CD	R 9.4 58.9 15x3x4	L	
23	FW170	9-10	6980	200	230	35000	10550	P40x8	DP44x10	Wau AB	6-4x4x4	Own UC8	U4 Op Own	w/2F	R 10.0 62.7 15x3x4	L	
24	FC170	9-10	6900	200	230	40000	10550	P40x8	DP42x9	Wau RB	6-5x5x4	Own UC8	U4 Op Own	CD	R 9.4 58.9 15x3x4	L	
25	FD195	12-12 1/2	8925	230	261	39000	10750	B10.50/20	DB10.50/20	Cum H Die	6-4x4x6	BL 734	U4 Op Own	1910W	2F	R 8.88 55.8 15x3x4	L
26	Stewart	12-12 1/2	730	124	124	39000	2875	B6.50/18	DB6.50/18	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.4 35.8 7x2x4x	T	
27	41XS	14	765	134	145	10000	2925	B6.50/18	B6.50/18	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.4 35.8 7x2x4x	T	
28	46H	14 1/2	695	134	176	10000	3250	B6.50/20	B6.50/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
29	44X	14 1/2	795	134	176	10000	3250	B6.50/20	B6.50/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
30	42X	14 1/2	895	145	176	11000	3525	B6.50/20	B6.50/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
31	43X	2	1125	145	176	12000	4005	B6.50/20	DB6.50/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
32	47H	2 1/2	895	134	190	12000	4005	B6.50/20	DB6.50/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
33	30XS	2 1/2	1425	145	190	12000	4350	B7.00/20	DB7.00/20	Lyc	6-3x4x4	WG	U4 No Cla	SF	H 5.6 35.8 7x2x4x	T	
34	32X	2 1/2	1895	145	220	16000	5190	B7.00/20	DB7.00/20	Lyc	6-3x4x4	BL	U5 No Cla	SF	R 7.16 40.7 8x2x4x	T	
35	32X	2 1/2	2190	165	220	18000	5460	B7.00/20	DB7.00/20	Lyc	6-3x4x4	BL	U5 No Cla	SF	R 7.16 40.7 8x2x4x	T	
36	58-8	3	2390	170	226	18000	6025	B7.50/20	DB7.50/20	Lyc	6-3x4x4	Fu	U5 No Cla	SF	R 7.1 47. 9x2x4x	T	
37	18X	3 1/2	2790	165	220	20000	6800	B7.50/20	DB7.50/20	Lyc	6-3x4x4	Fu	U5 No Tim	WF	R 7.25 47. 9x2x4x	T	
38	48-8	3 1/2	3090	170	241	20000	6750	B8.25/20	DB8.25/20	Lyc	6-3x4x4	BL	U5 No Cla	WF	R 7.1 47. 9x2x4x	T	
39	19X	3 1/2	3790	165	235	20000	7110	B9.00/20	DB9.00/20	Lyc	6-3x4x4	BL	U4 A 3 Tim	WF	R 7.25 48. 9x2x4x	T	
40	38-6	3 1/2-5	4090	170	241	25000	7600	B9.00/20	DB9.00/20	Wau	6-4x4x4	BL	U4 A 3 Tim	WF	R 7.25 48. 9x2x4x	T	
41	38-6	3 1/2-5	4090	170	241	25000	7600	B9.00/20	DB9.00/20	Wau	6-4x4x4	BL	U4 A 3 Tim	WF	R 7.25 48. 9x2x4x	T	
42	31X	5-8	5490	165	235	30000	9340	B9.75/20	DB9.75/20	Wau	6-4x4x4	BL	U4 A 3 Tim	WF	R 10.2 148. 9x2x4x	T	
43	27XS	7-8	6290	165	235	33000	10300	B10.50/24	DB10.50/24	Wau	6-4x4x4	BL	U4 A 3 Tim	WF	R 10.2 148. 9x2x4x	T	
44	Stud T230 (241 265)	1 1/2-2	625	130	165	9000	3150	B6.00/20	P32x6	Own	6-3x4x4	WG T9	U4 No Cla	SF	H 5.66 36.2 7x2x4x	T	
45	T430 (441-465)	1 1/2-2 1/2	785	130	165	10500	3445	B6.00/20	DB6.50/20	Own	6-3x4x4	WG T9	U4 No Cla	SF	H 5.66 36.2 7x2x4x	T	
46	T641 (653-665)	2-3	945	141	165	12000	4095	B6.50/20	DB6.50/20	Own	6-3x4x4	WG T9	U4 No Tim	54200	SF	H 6.8 43.5 7x2x4x	T
47	T841 (865-883)	3-4	1345	141	185	16000	4855	B6.50/20	DB6.50/20	Own	6-3x4x4	WG T9	U4 A 2 Tim	58200	SF	H 7.8 75.8 8x2x4x	T
48	W441 (885-903)	3-4	1795	141	185	17000	5295	B7.50/20	DB7.50/20	Own	6-3x4x4	WG T9	U4 No Tim	58200	SF	H 7.8 75.8 8x2x4x	T
49	Ward La Fr. 25R14	2 1/2	2800	196	208	14000	6000	B7.50/20	DB7.50/20	Wau ML	6-4x4x4	BL 324	U4 No Tim	54200H	SF	R Opt Opt 12x3x4	B
50	25R16	3	2975	197	208	16000	6200	B8.25/20	DB8.25/20	Wau ML	6-4x4x4	BL 324	U4 No Tim	56200H	SF	R Opt Opt 12x3x4	B
51	25R18	3-4	3275	196	208	18000	6400	B9.00/20	DB9.00/20	Wau MK	6-4x4x4	BL 324	U4 No Tim	58200H	SF	R Opt Opt 12x3x4	B
52	30R19	4	3675	197	226	19000	7000	B9.00/20	DB9.00/20	Wau MK	6-4x4x4	BL 524	U4 No Tim	65200H	WF	R Opt Opt 12x3x4	B
53	320	3-4	3825	197	226	19000	7175	B9.00/20	DB9.00/20	Wau SRL	6-4x4x4	BL 534	U4 No Tim	58200H	SF	R Opt Opt 12x3x4	B
54	30R-20	3-4	4300	196	226	20000	7280	B9.00/20	DB9.00/20	Wau SRL	6-4x4x4	BL 534	U4 No Tim	65200H	WF	R Opt Opt 12x3x4	B
55	30R23	5-6	4175	196	226	23000	7300	B9.75/20	DB9.75/20	Wau MK	6-4x4x4	BL 524	U4 No Tim	65200H	WF	R Opt Opt 12x3x4	B
56	335RWS	5-6	4975	196	226	25000	8700	B9.75/20	DB9								



Line Number	ENGINE DETAILS										FUEL SYST.		ELEC-TRICAL		FRONT AXLE		BRAKES		BODY MOUNT-ING DATA		SPRINGS		Auxiliary Type						
	Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	MAIN BEARINGS		Oiling System Type	Governor Make	Carburetors Make	Fuel Feed	Ignition System Make	Generator, Starter Make	Clutch Type and Make	Radiator Make	Universal Make	Make and Model	Steering Gear Make	SERVICE			Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear	
								Number and Diameter	Length												Make, Location Type Operation	Lining Area							Drum Material
1428	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	768	TD	106	Opt	31	40x2 1/2	50x3	C
1429	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	106	Opt	31	40x2 1/2	50x3	
1430	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	847	TD	118	Opt	31	40x2 1/2	50x3	C
1431	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1432	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1433	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1434	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1435	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1436	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1437	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1438	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1439	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1440	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1441	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1442	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1443	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1444	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1445	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1446	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1447	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1448	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1449	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1450	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1451	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1452	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1453	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1454	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1455	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1456	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1457	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1458	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1459	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1460	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1461	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1462	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1463	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1464	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1465	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1466	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1467	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1468	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1469	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1470	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	C
1471	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2	50x3	
1472	4.4	280	45.9	93	2200	L	L	CC	7-3	15	PC	Mo	Str	MAL	AL	D.Fu	Yo	Spl	Shu	Ros	L4IHV	893	TD	92	Opt	31	40x2 1/2		

Line Number	MAKE AND MODEL	GENERAL (See Keynote)					TIRE SIZE		MAJOR UNITS					FRAME			
		Wheels Driven—6-Wheelers	Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Striped)	Front	Rear	ENGINE		TRANSMISSION		REAR AXLE		
											Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Make and Model	Gear Ratios	
																Side Rail Dimensions	
1	(Fr. Wh. Dr.) (T) 60-T	20-25	6300	134	Op	60000	10000	B10.50/20	DB10.50/20	Wau 125	6-4x5x5	Own U	A 5Op	Own M	BF	H 7.35/73	7x3x11
2	(Concluded) (T) 72-T	25-30	7000	120	Op	72000	10450	B9.75/20	DB9.75/20	Wau 125	6-4x5x5	BL 724	U 4No	Wis 1237	2F	H 6.7/47.4	8x3x14
3	Indiana..... 12X4	11	2650	141	Op	10000	4350	B6.50/20	DB6.50/20	Her JXC	6-3x4x4	BL	U 4A	Tim 5320HM	SF	H 5.14/54.0	7x2x12
4	..... 14X4	12	3950	141	Op	14000	5900	B7.50/20	DB7.50/20	Her WXB	6-3x4x4	BL	U 4U	Wis	2F	H 5.40/50.0	7x2x12
5	..... 16X4	13	4850	156	Op	16000	7500	B8.25/20	DB8.25/20	Her WXC2	6-4x4x4	BL	U 4U	Wis	2F	H 6.06/89.0	8x3x14
6	..... 18X4	14	5850	160	Op	21000	9000	B9.00/20	DB9.00/20	Her YXC	6-4x4x4	BL	U 4A	Wis	2F	H 6.14/38.6	8x3x14
7	..... 18X4A	15	5400	160	224	21000	8700	B9.00/20	DB9.00/20	Her YXC	6-4x4x4	BL	U 4A	Wis	2F	H 6.14/38.6	8x3x14
8	..... 20X4	16	7200	188	Op	24000	10600	B9.75/20	DB9.75/20	Her HXB	6-5x6	BL	U 4A	Wis	2F	H 8.00/128	9x3x14
9	..... 22X4	17	10000	200	Op	31000	14000	B10.50/20	DB10.50/20	Her HXC	6-5x6	BL	U 4A	Wis	2F	H 8.11/86.0	9x3x14
10	Mar.-Her..... A10	11-2	2350	135	155	4650	B6.50/20	DB6.50/20	Her JXA	6-3x4x4	WG T9	U 4A	2Own-Tim	BF	H 6.60/82.3	7x2x12	
11	..... A20	23-30	3250	135	155	5150	B7.50/20	DB7.50/20	Her JXC	6-3x4x4	Clas R111	U 5A	2Own-Tim	BF	H 5.53/99.9	7x2x12	
12	..... A30	31-4	4300	155	167	7000	B8.25/20	DB8.25/20	Her WXC	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
13	..... A40	4-4	4800	155	167	7500	B9.00/20	DB9.00/20	Her WXC3	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
14	..... A50	4-4	5700	155	175	8700	B11.25/20	DB11.25/20	Her YXC	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
15	TH300	4-4	6150	163	193	8985	B9.75/20	DB9.75/20	Her YXC	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
16	TH310	5-5	7150	163	193	9620	B9.75/20	DB9.75/20	Her YXC3	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
17	TH310A	6	8050	163	193	10120	B9.75/22	DB9.75/22	Her RXC	6-4x5x5	Fu 5-A-530	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14	
18	(13) TH315	8-9	9350	180	216	10950	B10.50/20	DB10.50/20	Her HXB	6-5x6	BL 724	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14	
19	(13) TH320	8-9	11500	198	228	14200	B10.50/24	DB10.50/24	Her HXC	6-5x6	BL 724	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14	
20	Oshkosh..... JB	11-2	2085	146	170	10550	4975	B7.00/20	DB7.00/20	Her HXC	6-5x6	BL 724	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14
21	..... LB	2-3	2185	146	170	10550	4975	B7.00/20	DB7.00/20	Her HXC	6-5x6	BL 724	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14
22	..... LC	2-3	4275	146	165	13900	6700	B9.00/20	B9.00/20	Her JXC	6-3x4x4	BL 51-4	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14
23	..... LD	2-3	4575	146	165	15150	6950	B9.00/20	B9.00/20	Her WXC	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
24	..... BE	3-4	4960	146	165	19475	8175	B10.50/20	B10.50/20	Her WXC3	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
25	..... B3D	3-4	5390	146	165	19700	8400	B10.50/20	B10.50/20	Her WXC3	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
26	..... C3	4-5	5150	148	165	21850	8350	B11.25/20	B11.25/20	Her YXC2	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
27	..... C3A	4-5	5700	148	165	22200	8700	B11.25/20	B11.25/20	Her YXC2	6-4x4x4	Fu 5-A-380	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
28	..... FC	5	5990	146	165	22725	9225	B11.25/20	B11.25/20	Her RBX	6-4x5x5	Fu 5-A-530	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
29	..... FB	5-6	6350	146	165	25000	9500	B11.25/20	B11.25/20	Her RXC	6-4x5x5	Fu 5-A-530	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
30	..... FB-6	7-10	7350	146	165	30000	11500	B10.50/20	DB10.50/20	Her RXC	6-4x5x5	Fu 5-A-530	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
31	..... BG3	7-10	8500	165	175	37000	13200	P40x10	DP40x10	Her GXB	6-5x5x5	BL 734	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14
32	..... GD	10	9800	165	175	38000	14200	B13.50/20	B13.50/20	Her HXD	6-5x6	BL 734	U 4A	3Own-Tim	BF	H 6.17/105	9x3x14
33	Walter..... FN	23-30	4600	126	150	16000	6500	B9.75/20	B9.75/20	Own 6MK	6-4x4x4	Own FN	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
34	..... FM	3-5	5500	126	150	20000	7500	B9.00/20	B9.00/20	Own 6SRL	6-4x4x4	Own FM	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
35	..... FCKD	3-5	6600	124	136	25000	9000	B9.75/24	DB9.75/24	Own SRK	6-4x5x5	Own FM	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
36	..... FCS	5-7	7200	136	160	27000	9500	B9.75/24	DB9.75/24	Own 6SRK	6-4x5x5	Own FK	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
37	..... FBS	5-7	8000	136	160	30000	10500	B10.50/24	DB10.50/24	Own 6RB	6-5x5x5	Own FK	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14
38	..... FBR	7-10	8600	136	160	35000	11500	B11.25/24	DB11.25/24	Own 6RB	6-5x5x5	Own FK	U 5A	2Own-Tim	BF	H 6.17/105	9x3x14

## Six-Wheelers

39	B'kway 180SBT 2C	5-7 1/4	4350	212	224	28000	9795	B8.25/20	DB8.25/20	Con 32B	6-4x4x4	Fu 5-A-38	U 5Op	Tim SBT-251	SF	T 6.14/48.5	8x3x14
40	Corbett..... 168FD	6-2 3/4	5500	Op	Op	5110	B6.50/20	DB6.50/20	Con E602	6-4x4x4	Fu 5-A-38	U 5A	2Tim SD75H	2F	R 7.36/36	7x3x14	
41	(3) 168FD	6-2 3/4	5900	Op	Op	7040	B7.50/20	DB7.50/20	Lyc AEF	6-3x4x4	Fu 5-A-53	U 4A	Tim SD75W	2F	R 7.36/36	7x3x14	
42	..... 208W	4R	5720	Op	Op	9000	B7.50/20	DB7.50/20	Con 20R	6-4x4x4	BL 615	U 5No	Tim SW151TW w/2F	R Opt	Opt 8x3x14	43281.4	
43	..... 288W	4R	6380	Op	Op	10000	P34x7	DP34x7	Con 21R	6-4x4x4	BL 607	A 7No	Tim SW251TW w/2F	R Opt	Opt 8x3x14	43281.4	
44	..... 288FD	6-5 1/4	8900	Op	Op	11700	B8.25/20	DB8.25/20	Con 22R	6-4x4x4	Fu 5A53	U 5A	2Tim SD251W	2F	R 8.44	Opt 9x3x14	
45	..... 368W	4R	8800	Op	Op	11500	P36x8	DP36x8	Con 21R	6-4x4x4	BL 607	A 7No	Tim SW310W w/2F	R Opt	Opt 10x4x14	45428.4	
46	..... 368FD	6-7 1/4	12300	Op	Op	14600	B9.00/22	DB9.00/22	Her HXB	6-5x6	BL 734	U 4A	3Tim SD320W	2F	R 8.15	Opt 10x4x14	
47	..... 408W	4R	11000	Op	Op	13000	P38x9	DP38x9	Con 16H	6-4x4x4	BL 707	A 7No	Tim SW420W w/2F	R Opt	Opt 10x4x14	47611.4	
48	..... 458FD	6-10 1/2	16400	Op	Op	20000	17000	B9.75/22	DB9.75/22	Her HXC	6-4x4x4	BL 734	U 4A	3Tim SD420W	2F	R 8.15	Opt 10x4x14
49	Day Elder..... 150	3	1645	176	189	15000	5300	B6.00/20	DB6.00/20	Her JXB	6-3x4x4	WG T9	U 4No	Tim SBT75	BF	H 5.66/36.2	7x3x14
50	..... 285	4R	5295	205	234	29500	12000	B8.25/20	DB8.25/20	Her RXC	6-4x5x5	BL 534	U 4No	Tim SWD251H	WF	R 7.50/47.6	10x3x14
51	..... 345	4R	6395	205	234	34500	12500	B9.00/20	DB9.00/20	Her RXC	6-4x5x5	BL 534	U 4No	Tim SWD320W	WF	R 8.50/54.0	10x3x14
52	..... 402	4R	7495	205	234	40200	14200	B9.75/20	DB9.75/20	Her RXC	6-4x5x5	BL 725	U 5A	2Tim SWD420W	WF	R 9.0	63.6 10x3x14
53	Diamond T..... 801	4R	4140	189	219	21000	8500	P36x8	P36x8	Her YXC	6-4x4x4	BL 55	A 7No	Own	WF	R 8.15	Opt 9x3x14
54	..... 1201	4R	5000	180	210	28000	11000	P34x7	DP34x7	Her RXB	6-4x4x4	BL 607	A 7No	Tim SW320	WF	R Opt	Opt 9x3x14
55	..... 1602	4R	6400	175	210	36000	11700	P36x8	DP36x8	Her RXC	6-4x4x4	BL 607	A 7No	Tim SW320	WF	R Opt	Opt 9x3x14
56	..... 1603	4R	7500	184	224	36000	12500	P36x8	DP36x8	Wau 6RB	6-5x5x5	BL 70	A 7No	Tim SW320	WF	R Opt	Opt 9x3x14
57	Dodge..... G550	2C	935	153	153	12000	3650	B6.00/20	DB6.00/20	Own	6-3x4x4	Own	U 4No	Own	WF	H 5.85/36.1	7x2x12
58	Bros..... F875	2C	3995	221	221	30000	8350	B9.00/20	DB9.00/20	Own	6-3x4x4	Own	U 4No	Own	WF	H 7.13/48.2	10x3x14
59	Fageol..... 226HB	2R	3150	195	220	22600	7600	B7.50/20	DB7.50/20	Wau 6-90	6-3x4x4	BL 234	U 4No	Tim SBT151	SF	R 7.4	47.4 6x3x14
60	..... 326HB	2R	4350	195	220	30400	9700	B9.00/20	DB9.00/20	Wau 6-110	6-4x4x4	BL 524	U 4A	Tim SBT251	SF	R 7.4	47.4 6x3x14
61	..... 46HB	4R	7800	195	220	40500	14100	B9.75/20	DB9.75/20	Wau 6-125	6-4x4x4	BL 734	U 4A	3Tim Own	WF	R 5.7	120.4 15x4x14
62	..... 46AL	4R	8900	195	220	40500	11950	B9.75/20	DB9.75/20	Wau 6-125	6-4x4x4	BL 734	U 4A	3Tim Own	WF	R 5.7	120.4 15x4x14
63	..... 10-46AL	4R	9000	232	232	56000	15300	B9.75/20	DB9.75/20	Wau 6RB	6-5x5x5	BL 734	U 4A	3Tim Own	WF	R 6.2	135.2 15x4x14
64	..... 10-46AL	4R	10000	232	232	56000	13200	B9.75/20	DB9.75/20	Wau 6RB	6-5x5x5	BL 734	U 4A	3Tim Own	WF	R 6.2	135.2 15x4x14
65	Federal..... 22	4R	1670	172	198	15000	5000	B6.00/20	DB6.00/20	Her JXB	6-3x4x4	WG T9	U 4No	Clas B412	SF	R 6.38	40.8 8x2x



Type	ENGINE DETAILS										FUEL SYST.		ELEC-TRICAL		FRONT AXLE		BRAKES		BODY MOUNT-ING DATA		SPRINGS									
	Line Number	Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	MAIN BEARINGS		Governor Make	Carburetors Make	Fuel Feed	Ignition System Make	Generator, Starter Make	Clutch Type and Make	Radiator Make	Universal Make	Make and Model	Steering Gear Make	SERVICE		Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear	Auxiliary Type		
									Piston Material	Number and Diameter											Length	Make, Location, Operation							Lining Area	Drum Material
39360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
40360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
41360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
42360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
43360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
44360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
45360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
46360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
47360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
48360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
49360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
50360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
51360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
52360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
53360	4.5	240	40.8	90-2500	H	L	7-2 1/2	13	CC	KP	Zen	M	AL	AL	P	LI	GO	Spl	Shu 15692B12	Ros	L6IHV	708	G	CD	210	125	34 1/2	40x2 1/2	52x4	N
54360																														



Line Number	MAKE AND MODEL	Wheels Driven—6-Wheelers	GENERAL See Keynotes					TIRE SIZE		MAJOR UNITS							FRAME					
			Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. Stripped	Front	Rear	ENGINE		TRANSMISSION		REAR AXLE			Side Rail Dimensions	Type			
											Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Aux. Location and Speeds	Make and Model	Gear and Type			Drive and Torque	GEAR RATIOS	
																					In High	In Low
1	More-land	ED25M	4R 7	4067	184	Op	25000	8900	B8.25/20	DB8.25/20	Her WNC3	6-4 1/2 x 4	BL 334	U 4	No	Tim 65000	W	R7.50	46.0	9.4 x 3 1/2 x 4	T	
2		HD34M	4R 10	5869	220	Op	34000	11000	B9.00/20	DB9.00/20	Her RXB	6-4 1/2 x 5 1/4	BL 524	U 4	No	Tim 65720	W	R2.50	62.0	9.4 x 3 1/2 x 4	T	
3		TD34	4R 10	7607	221	Op	34000	13250	B9.75/20	DB9.75/20	Wau RR	6-5 x 5 1/4	BL 724	U 4	No	Tim 68720W	W	R8.75	62.0	11.3 x 3 1/2 x 4	T	
4		STERLING	2R 8 1/2	4580	174	Op	30400	9500	B9.00/20	DB9.00/20	Wau 6-110	6-4 x 4 3/4	Ow UC7	U 5	No	Ow	BF	R7.8	55.5	10.3 x 3 1/2 x 4	L	
5		FDT152	2R 8 1/2	4705	174	Op	30400	9700	B9.00/20	DB9.00/20	Wau 6-110	6-4 x 4 3/4	Ow UC7	U 5	No	Ow	2F	R9.0	52.7	10.3 x 3 1/2 x 4	L	
6		FDS180	4R 8-10	8905	158	Op	36000	12850	P40x8	DP40x8	Wau AB	6-4 1/2 x 5 3/4	Ow UC8	U 4	A 3	Tim 310	2F	R9.1	113.	15.3 x 3 1/2 x 4	L	
7		FDS200	4R 10-12	9130	159	Op	40000	13550	P40x8	DP40x8	Wau RB	6-5 x 5 3/4	Ow UC8	U 4	A 3	Tim 410	2F	R9.1	113.	15.3 x 3 1/2 x 4	L	
8		FCS210	4R 15-18	10175	Op	Op	42000	14750	P40x8	DP40x8	Wau RB	6-5 x 5 3/4	Ow UC8	U 4	A 3	Ow	CD	R9.5	59.6	15.3 x 3 1/2 x 4	L	
9		FDT200	2R 12-12 1/2	7670	178	Op	40000	12050	P40x8	DP40x8	Wau 6-125	6-4 3/4 x 5 1/4	Ow UC	U 4	Op	Ow	2F	R8.85	58.8	12.3 x 3 1/2 x 4	L	
10		FDT250	2R 16-16 1/2	8855	186	Op	50000	13550	P42x9	DP42x9	Wau RB	6-5 x 5 3/4	Ow UC8	U 4	Op	Ow	2F	R8.85	55.5	15.3 x 3 1/2 x 4	L	
11		FCT180	2R 10-10 1/2	7265	178	Op	36000	11200	P36x8	DP36x8	Wau SRL	6-4 3/4 x 5 1/4	Ow UC	U 4	Op	Ow	CD	R8.2	54.5	12.3 x 3 1/2 x 4	L	
12		FCT200	2R 12-12 1/2	7685	178	Op	40000	11800	P40x8	DP40x8	Wau 6-125	6-4 3/4 x 5 1/4	Ow UC	U 4	Op	Ow	CD	R9.3	61.8	12.3 x 3 1/2 x 4	L	
13	Ward	440TC	15	11000	240	246	44000	14000	B9.75/22	DB9.75/22	Cu. Die. HA	6-4 1/2 x 6	BL 735	A 5	No	Tim SBT420W	WF	R6.42	40.4	14.3 x 3 1/2 x 4	T	
14	LaFr.	440TR	15	9350	240	246	44000	13700	B9.75/22	DB9.75/22	Wau RB	6-5 x 5 3/4	BL 735	A 5	No	Tim SBT420W	WF	R6.42	40.4	14.3 x 3 1/2 x 4	T	
15		340TM	7 1/2	4700	204	230	28000	9200	B8.25/20	DB8.25/20	Wau MK	6-4 1/4 x 4 3/4	BL 5352	U 5	No	Tim SBT251H	SF	TOpt	Opt	12.3 x 3 1/2 x 4	T	
16		400T5	12	7100	203	241	40000	13000	B9.75/20	DB9.75/20	Wau 6-125	6-4 3/4 x 5 1/4	BL 5352	U 5	No	Tim SWT320W	WF	R8.5	65.5	14.3 x 3 1/2 x 4	T	
17	Wht.	630SW251	4R 5-6	(12a)	193	205	.....	10000	B8.25/20	DB8.25/20	Ow 7A	6-4 1/4 x 5 1/4	Ow 4B	U 4	No	Tim SW251	WF	R6.75	44.2	8.4 x 3 1/2 x 4	C	
18		642SW320	4R 7-9	(12a)	198	210	.....	12670	B9.00/20	DB9.00/20	Ow 5A	6-4 3/4 x 5 3/4	Ow 10B	U 5	No	Tim SW310W	WF	R8.5	55.6	8.4 x 3 1/2 x 4	C	
19		643SW420	4R 9-11	(12a)	198	215	.....	14400	P40x8	DP40x8	Ow 5A	6-4 3/4 x 5 3/4	Ow 10B	U 5	No	TimSW410W	WF	R10.2	69.1	18.4 x 3 1/2 x 4	C	

—Denotes new model or change in specifications.

## Black Sheep Chauffeurs

(CONTINUED FROM PAGE 31)

moving, in feet per second at any given speed you use the following formula: Take speedometer reading, divide it in two and add the original figure to the result and that gives you feet per second. To illustrate: One-half of sixty is thirty. Sixty plus thirty equals ninety. (Scientifically, it is 88 ft.)

2. Failure to know the distance an automobile takes to stop, after the brakes have been applied. The average private passenger automobile with four-wheel brakes in perfect condition on a dry level highway, when traveling sixty miles per hour stops within 168 ft. At 40 miles per hour 75 ft. At 20 miles per hour 18 ft.

3. Failure to recognize the fact that one's foot does not immediately strike the brake pedal when danger is observed, causes speed to become unsafe. The time which elapses when the driver sees danger until his foot leaves the accelerator and strikes the brake pedal until the brakes take hold is known as reaction time. A good driver requires one-half second of reaction time. Let me illustrate the value of half a second.

**Y**OU are driving an automobile down the highway 60 miles per hour or 88 ft. per second. A young child runs across the highway. Being a good driver, your reaction time of one-half second means that your car travels 44 ft., which is one-half of 88, towards the child, the car being practically out of control as far as stopping it is concerned. Fortunately for you, your brakes are in perfect order and after they are applied your car goes 168 ft. or a distance of 300 ft. in about six seconds time.

**T**HE above types are the kind of drivers we don't want. The ideal, of course, is the skillful driver who

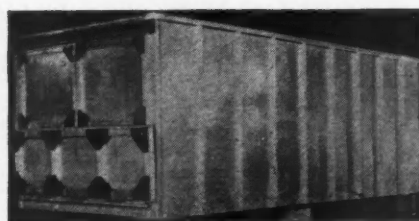
knows the motor code of his state, who knows when to drive fast and when to drive slowly, and who has his truck under control at all times. He is the man who takes the "kills" out of the road and places the "S" in front.

## A Light Chassisless 'Semi'

(CONTINUED FROM PAGE 25)

placing this dead load with pay load, the \$75 additional cost of the new unit will be paid for in approximately 11,620 revenue miles. Compared to the conventional steel and wood body unit, the monocoque weighs 2645 lb. less and costs about \$835 more. By the same reasoning of replacing dead load with pay load, the increase in cost of the new semi-trailer will pay for itself in 31,600 revenue miles. In this figuring it is assumed that each additional pound of pay load brings in a revenue of \$0.00001 per mile.

**A**NOTHER major economy favoring the use of aluminum semi-trailer bodies is that of maintenance, which includes painting and repairs. Paint takes a firm, lasting hold on aluminum. As for repairs, the high deflection of aluminum under load stands it in good stead in absorbing hard knocks. Bumps are bound to occur, even if the driver never backs into posts or slams a case against the side panel. There is the inevitable chance that someone else will



Chassisless "Semi" ready for mounting

do it for him. On the aluminum body the damage is confined to a small area. On a wood body a damaging blow may split the entire panel.

By making use of the bracing power of panels, the chassisless semi-trailer, constructed of aluminum alloys, is designed as an independent structural unit capable of supporting its own weight and that of the pay load.

**T**HE design for the Baltimore Company utilizes every pound of metal for a two-fold purpose—carrying the load and protection. In case the chassisless unit is built of high strength-weight ratio metals, and replaces a conventional unit in which both chassis and body are of such materials, the economy of monocoque construction becomes particularly apparent, since the price per pound of such metals is relatively high. Furthermore, the fabrication cost of the chassisless unit is usually less than that of a conventional unit of similar size, providing the same materials of construction are used.

The inside dimensions of this semi-trailer unit are: length, 216 in.; width, 90 in., and height at the eaves, 6 1/2 ft. As the roof bows have a 2 1/2-in. crown, the height from the floor at the center is 6 ft. 8 1/2 in. The over-all length outside is 219 in. from the front edge of the fifth-wheel plate to the tailgate strap hinges. The over-all width at the drip moldings at the top edge is 94 19/32 in. The total height is 7 ft. 4 7/8 in.

**S**IDE sills of the underframe are made of 6-in. aluminum channels which are assembled with clip angles and rivets and reinforced with gusset plates on the lower side. The cross-members, which are 5-in. channels, are spaced at 2-ft. intervals. The floor is built up of 15-gage corrugated sheet and 10-gage flat plate, which are riveted together.

Line Number	ENGINE DETAILS										SYST. FUEL	ELEC-TRICAL	FRONT AXLE	BRAKES			BODY MOUNT-ING DATA			SPRINGS			Auxiliary Type										
	Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	Number and Diameter	Length	Oiling System Type	Governor Make	Carburetors Make	Fuel Feed	Ignition System Make	Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	Make and Model	Steering Gear Make	Service	Make, Location Type, Operation	Lining Area	Drum Material	Hand Location, Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear		
1383	4.4	262	43.3	92-2400	L	G	C7-2 1/2	13 1/4	PC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 33020H	Ros	L6IH	661	a	TD	192	101	34	41 1/2 x 2 1/2	43 1/2 x 3 1/2	43 1/2 x 4	43 1/2 x 4	43 1/2 x 4	43 1/2 x 4	43 1/2 x 4	
501	4.9	330	48.6	110-2200	L	G	C7-3	12 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450TW	Ros	W6IA	960	a	TD	216	113	34	42x3	42x3	42x3	42x3	42x3	42x3	42x3	
677	4.4	254	38.5	110-2800	L	G	C7-3 1/2	12 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 27050W	Ros	W6IA	960	a	TD	216	113	34	42x3	42x3	42x3	42x3	42x3	42x3	42x3	
558	5.0	254	38.5	110-2800	L	G	C7-3 1/2	12 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 35000N	Ros	L4IHV	596	a	CX	192	91	34	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	
549	4.5	330	48.6	99-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 35000N	Ros	L4IHV	596	a	CX	192	91	34	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	42x2 1/2	
677	4.4	440	60.0	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	576	a	CX	Opt	88	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
9	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 27450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
10	4.4	440	60.0	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 27450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
10	4.4	440	60.0	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
11	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 27450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
12	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
13	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
14	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
15	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
16	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
17	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
18	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
19	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3
20	4.6	324	45.9	125-2000	L	G	C7-3 1/2	11 1/2	CC	No	Zen	MAL	AL	P.B.L	Lo	Cle	Tim 26450N	Ros	W6IA	792	a	CX	Opt	89	34	48x3	48x3	48x3	48x3	48x3	48x3	48x3	48x3

The side and end panels are single sheets of 0.064 in. thickness extending the full length and width of the body, and riveted to the side sills of the underframe. At 2-ft. intervals on the outside of the panels are fastened the side posts, which are extruded sections shaped like a flanged V. The side of the finished body looks like a web-plate girder, which it is in function, as ultimately it carries the entire load.

**T**HE roof rails are extruded sections which combine the functions of a footing for the carlines, a top rail for connecting the side posts, a support for drip moldings and a portion of the roof. Obviously this requires a complicated section; as a matter of fact it could not be duplicated in one operation on one piece by the rolling process often used for simpler structural shapes. Extrusion, however, is limited more by size than by shape (up to 11 in. in greatest diameter). The process consists in forcing metal in the plastic state at high pressures through openings in a die.

**A**FIFTH wheel plate, bearing the king pin, consists of a 1/4-in. plate riveted to a rectangular cradle frame which is built into the subframe and extends from the front end to the third bolster and is about one-third as wide as the body. The running gear is attached to the subframe by means of two pairs of 6-in. channels, one pair of which is attached longitudinally to the rearmost pair of cross-bolsters; the front ones bridge the next two bolsters, that is, numbers three and four counting from the rear. These are 29 1/2 in. long and are fastened to the subframe by pairs of 3-in. angles.

**D**OORS and tailgate are of a construction that matches that of the side panels in general design and in

sturdiness. The door framework is composed of extruded shapes of wide flanged U construction and panels of 0.064 in. sheet. The tailgate is similarly framed by the sheet is 3/16 in. thick.

Though this first chassisless semi-trailer was more or less experimental, it proved a sufficient commercial success to warrant building 10 more.

## The "Ideal" Fleet Truck

(CONTINUED FROM PAGE 14)

siderable variance of opinion as to the proper place to locate the battery. If under the floorboard, it should be on the right-hand side; if external, left side frame. Wherever mounted, to be accessible and as far remote from muffler pipe as possible.

**S**PARE TIRE MOUNTING — The problem of satisfactorily mounting the spare tire has perplexed the industry for years. We are unable at this time to make any definite recommendations. It is pretty generally agreed, however, that on light duty equipment we could carry the spare tire in a fender well, left side of the vehicle, and on the heavier-type truck resort to the underside-type of carrier to the rear of rear axle. In fender well-type mounting, more attention should be given to proper support of tire to prevent excessive maintenance at this point. On the underside-type carrier, the weight of the tire must be taken into consideration, as most road changes are accomplished by one man. The hinged type appears to more nearly meet this requirement.

**T**AIL LIGHT AND LICENSE BRACKET MOUNTING — Combination tail light and rear license bracket should be located external of left-

side frame rail, 6 in. from end. It is hoped the designing engineers will give some consideration to the length of the present license plates in mounting this bracket to prevent interference with the plates when removing spare tire.

Many States require both front and rear license plates and it has been noted that some manufacturers make no provision for carrying front plates. Suitable brackets should be provided to carry front plates either on front bumper or headlamps tire bar.

**LOCATION OF TOOL BOX**—Provision should be made for tool compartment under cab seat at the right end of tank.

## The Romance of Roads

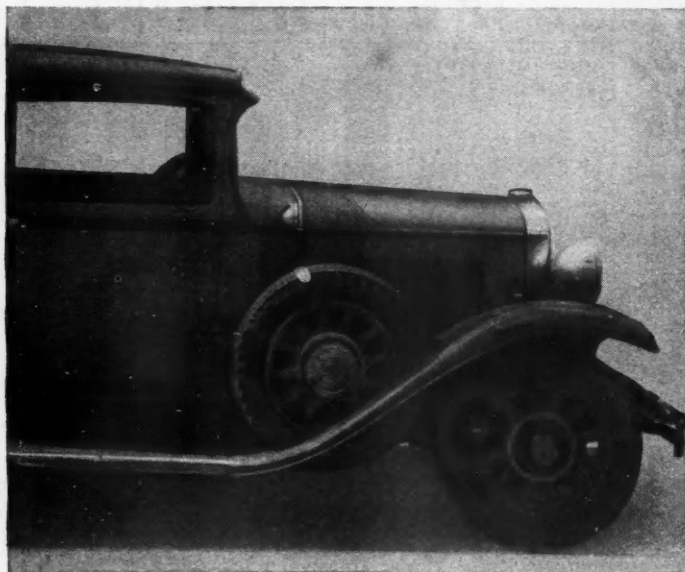
(CONTINUED FROM PAGE 24)

**F**IRST use of modern concrete as a road material appeared in a city street in Bellefontaine, Ohio, in 1893, in a section one block long. Its use was tried out a little later in alleys, in Windsor, Ontario. The first attempt to lay a modern concrete highway came in 1909 when the Good Roads Commission of Wayne County, Mich., laid a strip 18 ft. wide between the 6-Mile and 7-Mile roads just north of the city of Detroit. In the same year a fine brick road was built from Cleveland to East Liverpool, Ohio, but while brick, as a road-building material, had a vogue for a time its use declined.

**T**HE concrete roads over which we drive today are perhaps the finest in the world. The speed over which they may be traveled is our answer to the long-famous question put by the Indian chief "Blackhawk" who said, "The white man is strange. Why does he cut down trees and build roads wherever he goes when it is so much easier to go around them?"



# Just one of many actual cases



**AFTER 56,184  
MILES-NEW RODS  
SAVE 9 QUARTS OF  
OIL IN 1000 MILES**

**T**HIS 1930 Marquette coupe used one quart of oil for every 100 miles. Without reconditioning or replacing any parts except the connecting rods, oil consumption was cut to ONE-TENTH—a saving of 9 quarts each thousand miles—which soon paid the service cost.

The repeated experience of hundreds of repair shops around the country confirms this discovery: That worn connecting rods and bearings are one of the principal causes of oil pumping and poor engine performance.

It is true that often new rings, new pistons or a cylinder reboring job, or all three, are needed; but in many cases it has been found that oil pumpers only partly corrected by other means are entirely corrected by installation of new rods or bearings.

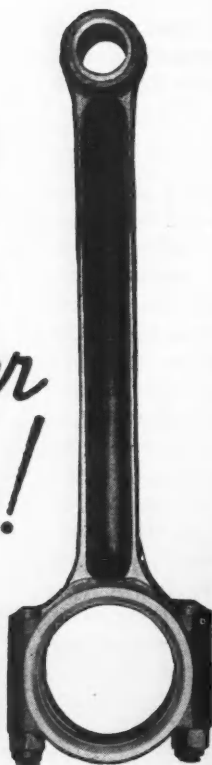
Therefore, to protect your reputation, to avoid customer dissatisfaction, *check the rods* when you open up a motor to correct oil pumping. If worn, replace with Federal-Mogul Rods or Slip-in Bearings, for an all-around quality job.

Connecting rod and bearing replacement offers you one of the finest profit opportunities in the entire service field, because until recently it was entirely neglected, with a resulting accumulated need.

Use Federal-Mogul Connecting Rods and Slip-in Bearings. Their uniform quality and precision is the product of experience and specialization in this field since the beginning of the automotive industry. There is a Federal-Mogul Jobber near you with a complete stock ready to give prompt service. Call him today.

*Remember  
the Rods!*

When you open up a motor to correct oil pumping, remember that worn connecting rods and bearings are a principal cause. Replace with complete sets of Federal-Mogul rods or bearings.



**Federal Mogul  
FEDERAL**

**FEDERAL-MOGUL CORPORATION - DETROIT, MICHIGAN**  
Operating Watkins Babbitting Service

COMMERCIAL CAR JOURNAL

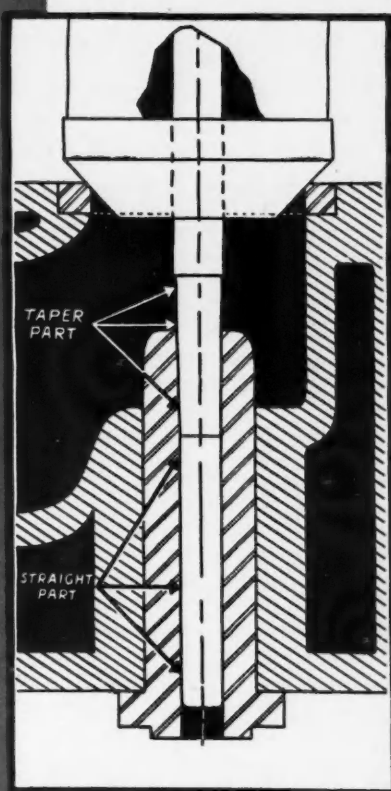


# You MUST have BOTH

## a Sioux Tapered Pilot AND a Good Grinder

### for ACCURATE Valve Seat Grinding

No matter how good your grinder may be, you can't get an accurately ground, properly aligned seat unless you use a proper-fitting pilot that positively holds the grinder in perfect alignment with the center line of the valve guide.



## SIoux TAPERED PILOTS

do exactly that very thing . . . and they are patented! They are tapered only in the upper portion (instead of the whole length). By selecting the largest SIOUX Tapered Pilot which will enter the valve guide, the straight part aligns the pilot correctly with the center line of the valve guide, thus assuring perfect accuracy. This is the only positive way to prevent misalignment and inaccurate grinding. Sioux Tapered Pilots also act as a plug gauge for checking wear in valve stem guides.

## SIoux DUAL ACTION VALVE SEAT GRINDER

offers almost unbelievable speed, simplicity and dependability . . . even on the hardest valve seats. Accurate within

.0005 (1/2 thousandth). No delicate adjustments. Its dual action produces a mirror-like finish. Built up to traditional SIOUX standards of quality and stamina. Priced within the reach of every shop!

With this combination . . . SIOUX Tapered Pilots AND The SIOUX Valve Seat Grinder . . . even the inexperienced mechanic can't go wrong!

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SIOUX CITY, IOWA, U.S.A.




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## Dope on Piston Expanders

(CONTINUED FROM PAGE 17)

**A**FTER several years of research work, one of the companies maintains that the skirt clearance is due to

wear on the piston and cylinder wall. This company further believes that piston collapse is seldom permanent and occurs only under operating conditions, due to vibration and heat.

Another company reports that it finds piston and cylinder wear and piston skirt collapse about equally divided in the piston expander installations that it has been able to check. A third company seems to think that skirt collapse is the chief contributing factor to excess clearance.

As a result of this difference of opinion, the expanders have widely different characteristics. One company engineers an individual expander for each piston, while others have six, or some like number, of sizes to cover the entire range. Some companies produce one expander to service all pistons.

**S**EVERAL expanders are manually adjusted for size. Pistons are expanded all around the skirt by some types of expanders, and only at the thrust side (90 degrees to the piston pin) by some of the others. Expander materials have no more relation to one another than do the details of construction. Special tools for cutting retention recesses are necessary for some designs, while the piston pin is the anchor for other types.

**P**ISTON expanders are at their best in conventional alloy pistons with a slotted skirt. Strut pistons do not respond quite so readily to this treatment and cast-iron pistons represent the most difficult problem. Instructions for slotting or cooling cast-iron pistons usually are provided by the manufacturers who recommend expanding this type of piston.

**T**HE expander engineers are emphatic in their claims of increased piston ring mileage when expanders are employed. When piston expander takes up the clearance between the skirt and the cylinder wall, it prevents

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the piston from rocking. The rocking action of the piston permits the sharp edges of the rings to gouge at the cylinder walls since the rings are not riding in the position in which they were intended to function. As a result, the rings wear barrel-shaped. With the piston and rings riding in correct position, the rings maintain their scraping edge for a longer service period.

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